DOCUMENT RESUME

ED 177 828 EC 121 577

TITLE Educational Methods for Deaf-Blind and Severely Handicapped Students. Volume III.
INSTITUTION Texas Education Agency, Austin. Div. of Special Education.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE Aug 79
NOTE 166p.; For related information, see EC 120 114 for Volume I and EC 120 743 for Volume II.

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Affective Behavior; *Communication Skills; *Deaf Blind; Elementary Secondary Education; Emotional Development; Evaluation Methods; *Family Programs; *Individualized Programs; Language Development; Multiply Handicapped; Parent Counseling; Parent Participation; *Prevocational Education; Severely Handicapped; Social Development; *Student Evaluation

ABSTRACT

Fourteen author-contributed papers from a series of 1978 workshops focus on educational strategies for deaf-blind and severely handicapped students. Four papers ("The Child-Centered Educational Process for Deaf-Blind Children" by L. Frank; "Issues in Assessment" by R. Condon; "Assessing Multihandicapped Visually Impaired Children" by J. Jones; and "Functional Psychoeducational Assessment Procedures for the Severely Handicapped" by E. Langley) address the topics of assessment and individual education plan development. Family Services is the focus of papers by M. Mei-ton Yu ("Parent Involvement"); B. McWilliams ("Counseling with Parents of Handicapped Children"); M. Fraser "Developing a Parent Involvement Program in an Education Agency: A Structural Model"); and J. Gray ("Rights of Parents"). S. Hupp considers the social/emotional aspect in "The Development of Affective Relationships and Social Skills in Deaf-Blind Students." "A Cognitive Approach to Prevocational and Daily Living Skills Training: Rationale and Implementation" by C. Ficociello and "Prevocational Programming at the Deaf-Blind Annex, Texas School for the Blind" by A. Wade review vocational skills. Concluding the document are three papers on communication: "Q: Why Do Children Acquire Language? A: Just Because" by G. Branigan; "Social Interaction: A Perspective for Interpretation of Early Communication for the Deaf-Blind Child" by A. Repp; and "The Use of Movement to Develop Body Schemes, Organization and Communication in Deaf-Blind Children" by K. Daniels. (CL)

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ED177828

EDUCATIONAL METHODS FOR DEAF-BLIND AND SEVERELY HANDICAPPED STUDENTS

VOLUME III

TEXAS EDUCATION AGENCY
DEPARTMENT OF SPECIAL EDUCATION
SPECIAL EDUCATION DEVELOPMENTAL SERVICES
CENTER FOR DEAF-BLIND

201 East Eleventh Street
Austin, Texas 78701
August 1979

Funded by:
U.S. Office of Education
Bureau of Education for the Handicapped
Public Law 91-230, Title VI, Part C

EC 121577

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Introduction

For the past two years, the Texas Center for Deaf-Blind and the regional Education Service Centers in the state have endeavored to provide training that is current, relevant, and accessible to personnel serving the deaf-blind and severely handicapped. The papers contained herein were collected from presentors at the fall 1978 series of workshops conducted jointly by the Texas Center for Deaf-Blind and the 20 regional Education Service Centers. As more experience is gained in working with deaf-blind and severely handicapped students, there is an opportunity to provide more comprehensive and refined knowledge concerning assessment and programming for these students. The consultants and presentors at these workshops have provided the most current information to be found. The challenge remains, however, for those in the field: to assimilate the knowledge available and to apply it while observing, recording, and searching for more appropriate strategies; more useful and reliable methods of educational programming.

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Fall 1978 Workshops for Personnel Serving Deaf-Blind and Severely Handicapped

October 16-17, 1978: Houston, Texas (Cluster D)

- Development of Communication Skills I (Theory and Research) - Dr. George Branigan
- Development of Communication Skills II (Classroom Application) - Ann Repp
- Assessment of the Severely Handicapped - Beth Langley, Susan Curtis
- Family Counseling - Dr. Betty Jane McWilliams
- Administrative Session - Kenneth L. Crow

November 1-2, 1978: Lubbock, Texas (Cluster A)

- Parent Involvement - Muriel Yu
- Communication for Deaf-Blind - Kathryn Daniels
- Prevocational and Work Skills Training - Annie Wade
- Administrative Issues - Kenneth L. Crow

November 9-10, 1978: Dallas, Texas (Cluster C)

- Parent Involvement - Jill Gray, Dale Rudin
- Prevocational and Work Skills Training - Dr. Lou Brown, Carmella Ficociello
- Implementing the Child-Centered Process - Raymond Condon, Lynn Frank, Tippy Timmins, Tom Valentine
- Administrative Issues - Don Weston

December 4-5, 1978: Fort Worth, Texas (Cluster B)

- Assessment and Programming - Beth Langley, Sandy Gaudry
- Home - School Programming (How to Work with Parents) - Mark Fraser, Mary Given, Camilla Herrera
- Administrative Issues - Don Weston

Table of Contents

Page

ASSESSMENT AND INDIVIDUAL EDUCATION PLAN DEVELOPMENT

The Child-Centered Educational Process for Deaf-Blind Children - *Lynn Frank* 3

Issues in Assessment - *Raymond Condon*. 9

Assessing Multihandicapped Visually Impaired Children - *Julie Jones* 13

Functional Psychoeducational Assessment Procedures for the Severely Handicapped - *Beth Langley* 24

FAMILY SERVICES

Parent Involvement - *Muriel Mei-ton Yu* 57

Counseling with Parents of Handicapped Children - *Betty Jane McWilliams* 62

Developing a Parent Involvement Program in an Education Agency: A Structural Model - *Mark Fraser*. 78

Rights of Parents - *Jill M. Gray* 89

SOCIAL/EMOTIONAL

The Development of Affective Relationships and Social Skills in Deaf-Blind Students - *Susan Hupp* 96

WORK SKILLS

A Cognitive Approach to Prevocational and Daily Living Skills Training: Rationale and Implementation - *Carmella Ficociello* 108

Prevocational Programming at the Deaf-Blind Annex, Texas School for the Blind - *Annie B. Wade*. 122

Table of Contents (continued)

Page

COMMUNICATION

Q: Why Do Children Acquire Language?
A: Just Because - *George Branigan* 131

Social Interaction: A Perspective for Interpretation of Early Communication for the Deaf-Blind Child - *Ann Repp*. 142

The Use of Movement to Develop Body Schemes, Organization and Communication in Deaf-Blind Children - *Kathryn Daniels* . . . 148

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ASSESSMENT AND INDIVIDUAL EDUCATION PLAN DEVELOPMENT

THE CHILD-CENTERED EDUCATIONAL PROCESS FOR DEAF-BLIND CHILDREN

Lynn A. Frank

In June of 1978, the Texas State Board of Education adopted new policies and administrative procedures providing for comprehensive special education services for all handicapped children. Under these policies deaf-blind children may be considered handicapped, and therefore they have the same rights and need to go through the same child-centered educational process as any other potentially handicapped child.

The child-centered educational process in Texas includes all of the procedures through which all potentially handicapped children must pass in order to determine each child's eligibility and need for special education services, to design an appropriate individual educational plan (IEP) for each child, and to monitor the child's educational progress. The steps in the process are child identification, individual assessment, IEP development, individualized instruction, related services, and IEP review.

Child Identification

Child identification is the part of the process through which potentially handicapped students are first identified by the school. Children who are not in school initially may be identified through Child Find efforts, community-wide screening, community agencies, parents, or other interested individuals. Children who are in school but not receiving special education services may be identified by classroom teachers or other persons. All children--both those in and out of school originally--are considered by a local campus referral committee for possible referral to any of a variety of special programs and services, including special education as one option. Consideration by this committee ensures that personnel at each local campus are aware of the needs of students within their catchment area, whether or not the students will actually be served on that campus. It also ensures that when the student eventually is ready for mainstreaming all or part of the day, the school will be prepared for the student and the transition will be smooth between special education and regular education programs.

Individual Assessment

If the campus referral committee decides that the child is potentially handicapped, the committee may refer the child to special education for comprehensive individual assessment. If the child being assessed is possibly deaf-blind, a person trained in the education of the deaf-blind must be assigned to assist in the assessment process. In the child-centered educational process, assessment is conceptualized in three stages which correspond to the

three major activities which must be performed by the admission, review, and dismissal (ARD) committee. In the first stage, assessment of physical, mental, or emotional conditions, assessment data are collected which enable the ARD committee to determine whether or not the child meets the Texas Education Agency eligibility criteria for special education services. All children being considered must be assessed to some degree in the language, physical, emotional/behavioral, sociological, and intellectual areas. In addition, other data are collected to document that the child meets specific eligibility criteria for the handicapping condition which is suspected. In order for deaf-blind children to be considered eligible for special education services, they must meet the criteria for the categories of hearing impaired and visually handicapped, which require that assessments be performed by licensed eye specialists, physicians, and audiologists. The professionals performing those assessments will provide written reports for the ARD committee specifying the type and severity of the impairments and the functional implications of the disabilities for situations involving instruction. It is important to note that while the professionals' reports are prerequisite to the ARD determination that the child is eligible, the committee may decide that the child does not meet Texas Education Agency (TEA) criteria even if professionals outside of the school state that the child is handicapped. All data collected in the first stage of assessment must be considered by the ARD committee as it determines eligibility.

In the second stage of assessment, assessment of educational performance levels, assessment data are collected which enable the ARD committee to determine whether or not the child needs special education instruction because of a legally defined handicapping condition. Individually administered, norm-referenced tests of educational achievement are administered to compare the child's educational functioning with that of other students in the district. In instances where the child's physical, mental, or emotional disability is so severe as to make norm-referenced testing impossible or inappropriate, documentation to that effect automatically demonstrates the child's need for special education instruction.

In the third stage of assessment, assessment of learning competencies, assessment data are collected which enable the ARD committee to develop an appropriate individual educational plan for the child. The child's present learning competencies, in either academic or developmental areas, are assessed either through the use of formal competency-based or criterion-referenced tests, or through more informal methods. The end result of this stage should be a series of statements describing in behavioral terms the child's present competencies, upon which goals and objectives in the IEP could be developed.

IEP Development

After all assessment data have been collected and compiled in written form, the admission, review, and dismissal committee meets to consider the child's eligibility and need for services. This committee includes school representatives from the areas of administration, instruction, and assessment, the child's designated educational liaison from the local campus referral committee, and the child's parent or guardian. If the committee agrees that the child meets eligibility criteria and does need special education services, the complete ARD committee then develops the child's individual educational plan.

The first section of the IEP is a statement of the child's present levels of functioning. Here is where those data from the third stage of assessment are most crucial. If the child is functioning at academic levels, the first part of this section will be statements of academic skills, particularly in areas where the child is going to need special education assistance. If the child is functioning at preacademic levels, this will probably be a statement of present developmental skills in areas such as language, social, cognitive, mobility, and self-care skills. This section will also include statements of the child's present behavioral skills, which will enable the development of goals and objectives for the child's behavioral development. Any physical disabilities should be included here insofar as they may affect instructional objectives in the physical education area or indicate needs for special related services. Additionally, if the child is at the secondary age level, this section should include statements of skills the child may have that would be prerequisite to placement in vocational programs available in the school district.

The second section of the IEP is a statement of annual goals and short-term instructional and related services objectives which are based on the child's present levels of functioning. In general, goals and objectives are developed for any services to be provided through special education resources, but not for services to be provided through the regular education program unless those activities have to be modified in some way to meet the child's needs. Annual goals are broad statements of the highest educational priorities identified for the child for the current program year. Short-term objectives are measurable intermediate steps designed to lead the child to the achievement of each annual goal.

The third section of the IEP is a statement of the combination of regular education, special education, and related services which will be provided to the child within which he or she should be able to achieve the established goals and objectives. Services will be provided within the least restrictive environment appropriate for the child.

The fourth section of the IEP is a statement of the amount of time to be spent in each setting, the projected dates for initiation of each service, the anticipated duration of each service, and the justification for the provision of each service. It is important to note that the times and dates are projected

and anticipated, but that they cannot be exact, since they must depend to some extent on the progress of the child within the services.

The final section of the IEP establishes the criteria and timelines for evaluation of the child's achievement of the short-term objectives. These evaluations provide the data on which new objectives and goals are established in the next year's IEP.

When the IEP is completed, all members of the ARD committee sign the IEP to indicate their participation in its development, and each member indicates concurrence or dissent with any or all parts of the IEP. The IEP establishes the programmatic framework within which services will be provided to the eligible handicapped child who is in need of special education.

Individualized Instruction

After the IEP is completed, the student begins to receive the individualized instruction established in the IEP according to the stated timelines. It is the responsibility of each special education teacher to identify specific activities, materials, and instructional strategies necessary to enable the student to achieve the objectives stated in the IEP.

Related Services

Related services are those developmental, corrective, or supportive services that may be required for an eligible handicapped student to benefit from special education instruction. In the same manner as for instructional services, related services personnel should identify specific activities, materials, and strategies necessary to enable the student to achieve the related services objectives established in the IEP.

IEP Review

Two levels of IEP review are required in Texas policies. The first level, which must be accomplished at least once every three months, is an informal review conducted by the implementers of the IEP. The special education teachers, related services personnel, or any other individuals charged with responsibility for assisting the student to meet specific goals or objectives should review the student's progress toward meeting the established objectives. If the student appears to be making satisfactory progress, the program continues as developed. If, however, the student is not progressing in the direction or at the speed indicated on the IEP, the implementer has two possible courses of action. Objectives may be modified as long as the original goal established in the IEP is maintained. If goals must be modified or placements changed, the implementer should request a new meeting of the complete ARD committee.

The second level of IEP review which must be accomplished at least once every year is a formal review of the student's progress conducted by the complete ARD committee. At this time the committee must decide whether or not the student continues to meet eligibility criteria, whether or not the student still needs special education services, and, if both of those conditions are met, the committee must develop a new IEP for the student for the next year. At least once every three years the assessment data must be updated for the committee's use in these determinations.

The Deaf-Blind Child in the Child-Centered Educational Process

As can be inferred from the preceding discussion, very few special modifications are needed in the procedures for carrying out the child-centered educational process for deaf-blind children. The kinds of assessment data collected about deaf-blind children and the methods through which those data are collected will probably be different for deaf-blind children than for other handicapped children, but the basic process will be the same. The kinds of personnel who are selected to be part of the ARD committee may be different when that committee is considering the needs of a deaf-blind child, but the basic representation will be the same as for other handicapped children. The IEP may be more heavily weighted in favor of behavioral and developmental areas for the deaf-blind child than it is for other handicapped children, but the basic structure will be the same. The kinds of instruction and related services designed for the deaf-blind child may be different from those provided for other handicapped children, but the basic options and arrangements are the same. In short, handicapped children must be seen as children first and handicapped second. Deaf-blind children have the same rights to an education as all children in Texas, and they have the same rights to all of the procedures in the child-centered educational process as any other handicapped child in Texas.

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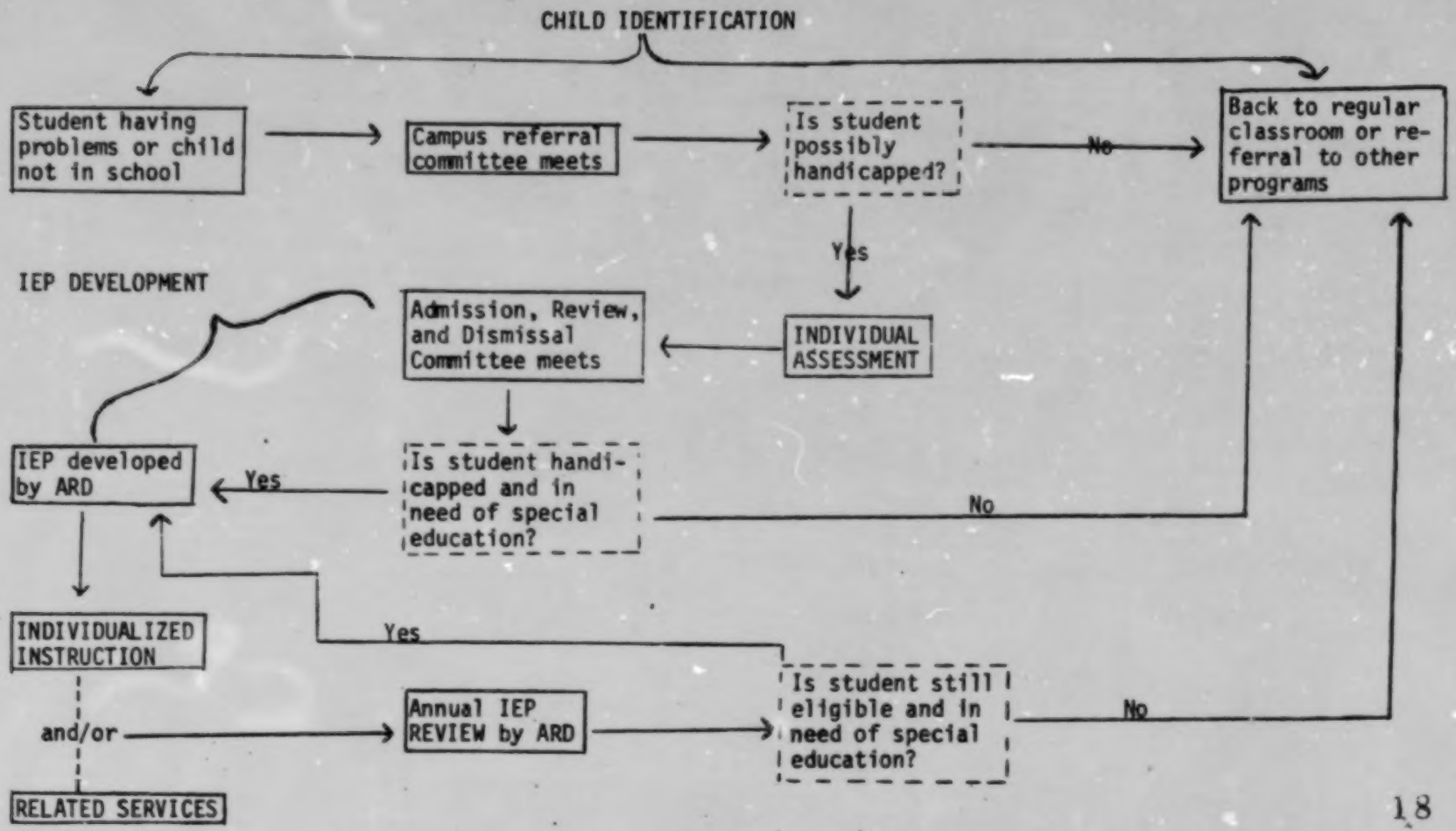

THE CHILD-CENTERED EDUCATIONAL PROCESS (State Board of Education Policy 3572)

ISSUES IN ASSESSMENT

Raymond Condon

The policy and procedures outlined by the Texas Education Agency require that a comprehensive assessment support the admission review dismissal (ARD) committee's development of an individual educational plan (IEP) for all special education students. This assessment is divided into three levels: a determination of physical, mental, and/or emotional conditions; a determination of educational performance levels; and the identification of specific learning competencies. The first two levels qualify a student as handicapped by determining the presence of a disability and resultant educational deficit. Although classroom personnel may assist, doctors, psychologists, therapists, and educational diagnosticians have primary responsibility to perform these assessments. Once they are complete, the final level is initiated to outline the potential course of remediation to offset the effects of the disability. For the purposes of the ARD committee, the results of this assessment become specific recommendations regarding the direct and indirect programming services most useful for the education of this child. The personnel assigned to conduct this assessment will vary, but should certainly include knowledgeable educational staff who work directly with children.

For the purposes of those people who implement the IEP, levels two and three represent only an initial effort. The requirements of actual teaching necessitate an ongoing, continuous activity which provides the educator after each contact with the child with more information about the child's performance, potential for various teaching strategies or objectives, and feedback on the effectiveness and appropriateness of current strategies, goals, and objectives.

Unfortunately, much confusion exists about assessment because of the variety of uses for it and ways in which it can be conducted. A given purpose and method interact with each other to determine the nature of the assessment product. Effective use of assessment must involve a thorough knowledge of its uses and the methods and their relationship so the needs of the individual teacher can be satisfied.

The most simple definition of assessment is the collection of information. The subject of inquiry (what is being examined) is determined by the purpose of those conducting it, the type of assessment method used, or both. Human behavior offers a multitude of types of behavior which can be investigated. Since human behavior is so complex, it can be subjected to different methods of organization. In education, categories

such as cognition, intellectual ability, stimulus response, motor performance, socialization, personality, attitudes/emotions, or specific content subjects such as mathematics, indicate that any aspect of behavior which can be learned or taught has potential as an assessment area. The actual categories represent some individual's or group's attempt to define or label a complex system of components under a unified heading which hopefully corresponds to the existence of an ability area. The ultimate composition of these categories for classroom use often depends on an individual teacher's philosophy of development, the requirements established by the school administrator, and/or the philosophy of the curriculum or assessment instrument being used.

After it is gathered, this information can be used for the identification of special aptitudes or disabilities, as criteria for screening grouping, for evaluating individuals, as an indication of future performance in a related type of activity, or as a description or summary of the present functioning level compared to other individuals or some other standard. Regardless of what areas are selected, the information should be helpful. For a teacher this means aid in establishing educational priorities and sequences (goals and objectives), as well as measuring progress and the effectiveness of teaching techniques and objectives. Assessment information should also provide activity material concerning the child's preferences, areas of relative strength, individual learning style, and optimal learning environment.

Two major options exist for conducting assessment: using prepared instruments or self-made ones. Previously developed instruments have the advantage of supplying a structure to systematically gather information. In addition, these devices are often standardized and have demonstrated reliability. These prepared instruments can be classified into norm-referenced and criterion-referenced measures. A heated controversy still surrounds the relative merits of each. Norm-referenced instruments compare the performance of one individual against the performance of other individuals from the same or a similar population. There are instruments which yield a score like the IQ test or any of the various achievement tests. Other instruments such as developmental scales produce a developmental age derived from compiling a representative sample of behaviors and their average age of appearance. Although both of these types produce a score, they can be subjected to an item analysis to explore specific areas of deviation from the norm. It requires great skill to determine the intent of an item because the theoretical construct of the instrument must be known, which is not always the case. Criterion-referenced instruments attempt, on the other hand, to escape this comparison of one against many by changing the standard of comparison to the acquisition of the target objectives of instruction. In other

words, the instrument measures the individual's performance in terms of achievement or nonachievement of instructional targets. Obviously, this method also requires a sampling to reduce the task of measuring an individual's performance in a complex area of behavior. Many teaching curriculums employ assessment instruments which measure whether the instructional targets have been achieved. Unfortunately, developmental checklists have been used in this manner. Individual items which constitute a representative behavior become instructional targets without any attempt to examine the underlying processes reflected by that item. Achieving one item will not automatically assure the generalized ability.

Teacher-structured methods allow for flexibility and suitability according to the specific needs of the teacher. Unfortunately, these informal (not standardized) procedures or measures require that the teacher provide all the organization, using a strong, well-developed, theoretical basis so that "important" or "crucial" behaviors are measured. The immensity of such a task represents a serious impediment to sole, widespread use of informal assessment tools. Informal measures would not provide a basis to compare progress or development against an independent measure which the prepared instruments could undoubtedly do. At the same time, informal measures use the experience and expertise of the individual teacher and probably would provide most useful information for the actual implementation. A compromise, then, would seem to be the best approach with the teacher using each device where most appropriate. Teachers who work with severely handicapped have the additional responsibility to have a comprehensive understanding of not only the theoretical basis and origin of the assessment instruments used but also an understanding of the alternative behaviors which might confirm the existence of some particular ability. A tool is only as effective as the person using it, and the efficient use of assessment requires this understanding.

No matter what type of device a teacher selects, a knowledge of how to do the actual mechanics of assessment is essential. There are three discrete stages for conducting assessment. The initial stage is collecting the information. Also involved in this process are the methods for recording and observing behavior such as case history, informal observation methods, and administering rating scales or checklists. As with any skill, practice and familiarity with the methods is necessary for obtaining useful data. After the actual collection, the information must be organized or grouped so it can be used. Even structured instruments can be further analyzed for general patterns or possible discrepancies. The teacher must take an active role in putting the assessment information into a structure that will reveal how the child functions. How the various aspects of the child's behavior influence each other and what effect the

disablity has on the general level of functioning are questions appropriate for the final stage, interpretation. As the strengths and weaknesses are identified, the teacher needs to formulate hypotheses which will serve as the basis for an effective approach. As the plan is implemented, continued assessment monitors both the rate of progress and the accuracy of the remediation hypotheses.

Ultimately, each teacher must choose the assessment techniques which seem best. Sometimes free choice is somewhat curtailed as a particular assessment system has been adopted already. Even so, a teacher still has the right and obligation to supplement with additional devices. The usefulness of any assessment tool must be judged by how accurately and comprehensively it can describe a child's behavior. But it should also provide direction for the planning process. When the teacher understands the theoretical basis of an assessment instrument, it is a much more powerful and flexible tool.

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ASSESSING MULTIHANDICAPPED VISUALLY IMPAIRED CHILDREN

Julie Jones

When a child enters a program we must make certain decisions regarding this child in order to plan appropriately for him or her. The purpose of our meeting today is to learn about such decision-making with respect to the multihandicapped visually impaired (MHVI) child.

I would like to make a distinction between the terms "testing" and "assessment." When we "test " a child, we select an instrument that is designed to measure some characteristic of the child. We present the various tasks of the test to the child and, based on his or her performance, we determine some quantitative measure of that characteristic in the child (Langley, 1978). Please note the use of the phrase "quantitative measure." In assessment, however, we may employ tests, but our purpose in doing so is to obtain a qualitative measure of the characteristic. We are not simply looking at whether the child can perform a certain task; we are looking at how the child performs. Through the assessment process we learn about the child's skills, abilities, deficits, and behavior patterns. We attempt to determine why the child performed or failed each item. The outcome of this process should yield a picture of how the child currently functions, where to go next (long- and short-term goals), and how best to get there.

The first step in planning an assessment strategy is to develop a set of questions to be answered during the assessment process, for example, what do we want to know about the child we will be assessing? Based on this list of questions, we can begin to choose the appropriate assessment procedures. No one assessment instrument will answer all questions. It will be necessary to choose several and then to supplement them heavily with our own careful observations. Langley (1978) lists six characteristics that tests administered to MHVI children should possess:

1. They should be easily obtained and scored.

2. They should possess adequate validity and reliability.

3. Items should be variable, objects should be accurate and simple representations of the real item, and materials should be multisensory in nature. Both verbal and performance items should maintain the child's maximum attention and should assess global abilities. Often blind children have a wealth of stored rote facts but exhibit no problem-solving strategies.

4. Scoring of items should be minimally dependent upon the child's speed of performance.

5. Items should be easily adaptable to an auditory or tactual mode.

6. The instruments should yield data immediately transferrable into sequentially planned developmental activities for educational programming. (p. 3)

Basic Information

Before discussing specific tests used with this population and before planning the informal assessment, we should review some basic types of tests. Tests are norm-referenced, standardized, or criterion-referenced. Norm-referenced tests yield qualitative information regarding a child's performance. Scores from these tests tell us where the child stands within a certain population (Cronbach, 1970), but they do not offer information regarding the specific strengths and weaknesses of the child. Knowing that a child is functioning below grade-level in math tells us that we need to concentrate our efforts in teaching math, but it does not tell us specifically what to teach. The Wechsler Intelligence Scale for Children (WISC) and the Stanford-Binet are examples of norm-referenced tests. A standardized test refers to the method of administration of the test. The test is standardized when we are told specifically how to present each test item to a child, sometimes even exactly what to say. The WISC, Stanford-Binet, and achievement tests such as the Metropolitan are examples of standardized tests. They are also norm-referenced. Standardizing guarantees that a test will be administered the same way whenever it is presented. This is to ensure that no one child will receive more or less information than another and thereby affect the performance on the test.

A child's performance on a criterion-referenced test does not tell where the child stands in reference to some population. Rather, it tells how well a child is demonstrating certain behaviors. In constructing these tests the authors begin by delineating as clearly as possible a class of behaviors that define different achievement levels of a certain skill. Then they define each behavior class by a set of test items or tasks so that all the important aspects of the skill can be displayed. Then they choose a representative sample of these items to make up the actual test. These classes of behaviors and the items chosen to represent them are hierarchical in nature so that a child's performance on the test will show where in the hierarchy of the skill the child is functioning.

Formal Assessment

In order to discuss the assessment of a MHVI child, I have chosen to differentiate between the devices for testing and/or assessing a child and the less formal teacher-made evaluative procedures. There are many such published devices used with the MHVI child. Many are standardized and norm-referenced. Others follow more of a checklist format. Frequently they relate directly to a prepared curriculum. The California State Department of Education, through the Southwestern Regional Deaf-Blind Center, has published an Assessment Tool Comparison by Margo Dronek (1977) which offers detailed information for 18 such devices commonly used with deaf-blind children in the Southwest Region.

I would like to focus briefly on a few others which have proven helpful during the assessment of MHVI children. When evaluating such a child several instruments will be needed. Exactly which one will depend on the information desired, the apparent level of the child, the nature of his or her visual impairment and concomitant handicaps, and the preferences of those evaluating the child.

Balthazar Scales of Adaptive Behavior

The Balthazar Scales of Adaptive Behavior were originally developed for use with severely and profoundly retarded children. Section I of the scales relates to functional independence (Balthazar, 1971), and Section II relates to measures of social adaptation (Balthazar, 1973). Section I is divided into three scales: eating scales, dressing scales, and a toileting questionnaire. The eating scales cover dependent feeding, finger foods, spoon usage, fork usage, and drinking. A supplemental checklist is included to evaluate self-service, use of assistive devices, type of food, position for feeding, rate of eating, advanced utensil usage, and supervision. Dressing scales include both dressing and undressing and covers putting on and taking off a dress, pants or skirt, shirt or blouse, undershirt, briefs, socks, and shoes, as well as lacing and tying (Sailor & Horner, 1976). Section II is composed of eight categories. Included are measures of unadaptive self-directed behaviors such as stereotype; adaptive self-directed behaviors such as exploration; unadaptive interpersonal behaviors such as aggression; adaptive interpersonal behaviors such as fundamental social behaviors and gesturing, verbal communication, play activities, and object relations; response to instructions; and a checklist of other behaviors (Sailor & Horner, 1976). The various items of the scale measure small differences in behavior, and directed observation is the primary method of evaluation. The individual being rated would be engaged in "typical" activities in "familiar" settings during the evaluation (Sailor & Horner, 1976).

Portage Guide to Early Education

The Portage Checklist is the assessment instrument which accompanies the rather extensive file of activity cards and together make up the Portage Guide for Early Education. The Portage Guide to Early Education is a curriculum designed for use with preschool-level handicapped children. The curriculum and checklist follow the sequence of normal child development, and the checklist is a compilation of behaviors typical to children birth to five years of age. Adjustments in the items of the checklist and in many of the activities are necessary for children with visual and/or physical impairments. Also, there are gaps or jumps in the checklist so that teachers must supplement the curriculum until the child attains the next item of the checklist.

Project Vision-Up

Project Vision-Up, like the Portage Project, is a curriculum developed to be used with preschool handicapped children. It too consists of an assessment instrument and curriculum guide. The assessment instrument is in the format of a series of cards which the parent or primary care-giver sorts into three piles indicating whether the child demonstrates or has demonstrated the skill, does not have the skill, or the care-giver does not know if the child has or has had the skill. After the sorting has been completed, the responses are recorded and from them the child's program is planned. Project Vision-Up is based on the sequence of normal child development within a Piagetian framework.

Other Instruments

Many other instruments are available and are used in evaluating MHVI children. The Bayley Scales of Infant Development (Bayley, 1969), Uzgiris-Hunt Scales (Uzgiris & Hunt, 1975), the Cattell Infant Intelligence Scale (Cattell, 1940), the Merrill-Palmer Scale of Mental Tests, the Maxfield-Buchholz Scale of Social Maturity for Preschool Blind Children, and the Milani-Comparetti Reflex Testing (Milani-Comparetti & Gidoni, 1967), are just a few. Since few have been developed and/or normed for use with visually impaired or MHVI children, interpretation of results must be judicious.

Informal Assessment

The formal, standardized assessment instruments we currently have available to us offer useful information, but they can only be a starting point. It is the informal assessment that will tell us the most about a child. There are a number of advantages to the informal assessment. First, it allows us to employ a variety of settings and materials to assess each skill. Second, we have freedom and flexibility to determine the structure of tasks most suitable for each child. Also, we can establish or maintain routines. Finally, what we have learned from the assessment can be transferred directly to the teaching situation.

Development of the Blind Child

The person or persons assessing the MHVI child need to be familiar with the development of the normal child. In addition he or she must know how various handicapping conditions affect this development. Fraiberg and her associates (Adelson & Fraiberg, 1974; Fraiberg, 1977) have followed the development of several totally blind children from infancy in order to determine the effects of blindness on the development of the child. Since there are many books available which detail the development of the sighted normal child, I will not present a discussion of it here. I would, however, like to look at some of Fraiberg's findings since they relate to the development of the MHVI child as well as the visually handicapped child without concomitant handicaps.

Motor Development

In their study of the gross-motor development of the blind, Adelson and Fraiberg (1977) found that the children develop postural control at approximately the same age as the sighted child. The change in mobility that typically accompanies attainment a postural milestone, however, is considerably delayed in the blind child. For example, her blind children sat alone momentarily, rolled from back to stomach, sat alone steadily, took stepping movements when hands were held, stood alone--all developmental pinpoints involving only postural control--on schedule. Elevating on arms in prone, raising to a sitting position, pulling to a stand, walking alone--all milestones requiring self-initiated mobility--were significantly delayed. The median age of achievement for these mobility milestones for signted and blind are displayed in Table 1.

Table 1

ACHIEVEMENT OF MOBILITY MILESTONES[a]

Item	Median Age	
	Sighted	Blind
Elevates self on arms in prone	2.1	8.75
Raises self to sitting position	8.3	11.00
Pulls up to stand	8.6	13.00
Walks alone, three steps	11.7	15.25
Walks alone across room	12.1	19.25

Note: All ages in months.

[a] Taken from Adelson and Fraiberg, 1974.

Object Permanence

In the sighted child object permanence is developed by the end of the sensorimotor period, between 18 and 24 months (Phillips, 1975). Its development is considerably delayed in the blind child (Warren, 1977). Acquiring the ability to reach to objects based on a sound cue alone forms important steps in establishing object permanence. Fraiberg has detailed the blind child's learning to reach for objects based on a sound cue alone. She and her associates found that initially the child aged 5 to 7 months makes no move to reach for an object when it is sounded after immediate manipulation of the object. If the object is touched to the child's fingers, the child will explore and grasp it, however. The six- to nine-month-old blind child occasionally seems to orient his or her head to the sound of the object and seems to activate the hands in a grasping movement, but still does not initiate a search based on sound alone. If the object is touched to the child's hands, the child will begin a random search in the place where he or she expects to find the object. The nine- to 12-month-old may reach for the object based on a sound cue if the child has manipulated it. If there has been no previous contact, the child may begin grasping but not searching. At this age removal of the object from the child's hands will result in protest from the child and a hand will follow the toy. By 12 months the child will reach for the object based on a sound cue alone (Fieber, 1977).

Imitation

Deferred imitation signals the beginning of symbolic meaning in the child (Swallow, 1977). Much of what we know is learned by imitating others. The MHVI child needs planned, systematic instruction directed at the development of deferred imitation. Swallow (1977) has described the importance of imitation.

> Basic to language expression is that the child has a significant person with whom to relate. Typically, affective interaction begins with the eye contact. The child then develops smiling and his own gesture system in order to communicate with the mother figure....These behaviors...are fundamental to the development of a symbolic communication system. Total communication, including signing and finger spelling...is rooted in the development of imitation. Too often programs for the multiply handicapped child do not systematically develop imitative behavior from its beginning. (p. 25)

When assessing an MHVI child it is important to determine if the child has developed deferred imitation. If the child has not, then we must determine where in its development the child stands. Obviously to do so we must know the course of this development.

Flavell (1977) has described this course well. Initially any immediate repetition of the young infant's behaviors (1-4 months) may result in the infant's making them again. A brief back and forth game of repetition may begin. It is important to remember that during this stage the child must be the initiator of the behavior and that repetition must be the same behavior. No variation can occur. During the next stage (4-8 months) it is not necessary for the child to be the initiator. The adult can initiate the behavior, and the child will repeat it if it is within his or her repertoire of behaviors and if he or she can see or hear himself or herself produce it. Between 8 and 12 months the adult can be the initiator; the child can repeat the behavior, even those which the child cannot actually see or hear; the initiator can change the behavior to some degree. Sometimes the actions the child makes will be analogous rather than exact, such as opening and closing his or her eyes when the initiator has opened and closed a mouth. Now the child is beginning to learn by imitation. Between 12 and 18 months the child practices and refines his or her imitative skills. The initiator can make larger changes in the child's behaviors, but the child will frequently succeed in imitating them. Trial and error will still be present, but the child will be much more accurate. Finally, between 18 and 24 months the child achieves deferred imitation.

The Assessment

Before beginning the hands-on assessment, the evaluator should observe the child as he or she follows an established routine such as a school-day routine and as he or she engages in an unstructured freeplay activity. Much can be learned from watching the child interact with others. If possible, routines that have already been established should be followed during the assessment. As the assessment progresses these routines can be changed and the child's reaction to the change can be evaluated. If it is not possible to follow pre-established routines, then new ones should be developed. How quickly the child develops an awareness of these new routines can be determined.

Where the evaluator works with the child during assessment sessions is important. For example, if the child is cerebral palsied and does not have head control, it would be best to work with the child while he or she is positioned over a wedge. Other positions which serve to facilitate head control can be used as well. Properly positioning a cerebral palsied child is of paramount importance because incorrect positioning may result in the inability to perform. Seating an active child at a child-sized table and chairs may help to control the child. The table and chairs may serve as the needed boundaries for the child. Of course, just as in teaching, during assess-

ment working from behind offers better control and affords the opportunity to allow the child to know how an activity feels to the one doing it. When possible, sitting at a 90 degree angle to the child allows manipulation from behind and face-to-face contact at the same time. Finally, when working in a room that is strange to the child, allowing the child to explore the area briefly may serve to orient him or her to the room and quiet curiosity about the new room.

When presenting tasks to the child, it is important to communicate exactly what he or she is expected to do. This can become an assessment item in itself. Can the child perform the task by simply being told what to do? Can the child comply if gestures and pointing are included in the verbal directions? While describing what to do is it necessary to put the child's hands on the objects in the order of their use in the activity? Finally, does the child perform after being physically manipulated through a sequence of the activity?

In structuring activities for the child, specific limits should be set and communicated to the child. For example, if the child is to remove stacking rings, then there should be a specific place that each ring is to be placed. Also, the amount that the child is to perform should be clear. How endless a box of 100 pegs appears, even when 10 have been removed but how quickly 10 pegs seem to be disappearing after only 4 have been removed.

During assessment, no matter what the task, it is important for the evaluator to have the task analysis of the task. With the task analysis the child's level of independence for each step in the task can be determined. It can also be determined how best to structure the task in order for the child to perform with the greatest degree of independence. If the child is unable to perform a task independently, the evaluator can attempt to teach the child the task. The number of trials necessary for the child to move from one level of manipulation to the next (e.g., from total hand-over-hand manipulation to initiating the first movement independently) and/or total independence can be recorded.

Part of the assessment process may be determining effective reinforcers for the child. Through the presentation of tasks, then, different reinforcers can be used and evaluated. Even when effective reinforcers are known, they should be used. They serve as strong motivators, and the purpose of the assessment is to determine where and how the child is functioning. It may be inportant to have determined that, even though the child wanted the reinforcer, it took X number of trials before the child began to connect the reinforcer with performance on a task.

An adequate assessment of an MHVI child cannot be completed in a short period of time. At least several days are necessary,

and for many children several weeks may pass before the child's true levels of functioning are known. For this reason, initial placement and program development may need to be re-evaluated. The classroom teacher will be in the best position to assess the child comprehensively. His or her day-to-day contact with the child will offer insights that a short-term assessment may miss.

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FUNCTIONAL PSYCHOEDUCATIONAL ASSESSMENT PROCEDURES FOR THE SEVERELY HANDICAPPED

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Because of the influx into school systems of a population of severely handicapped children who have never before had access to a total education program, teachers and diagnosticians have had to adjust their methods and procedures to meet the needs of this population. Indeed, an overwhelming amount of environmental engineering has been necessary. A lack of training in the appropriate teaching techniques and assessment procedures and instrumentation imperative for, and unique to, severely handicapped youngsters, has created a precarious foundation in the designing of specialized programs to facilitate maximum potential.

The most essential tool for appropriate program design is that of assessment. Understanding where the child functions in the developmental progression of cognitive, linguistic, gross and fine motor, and self-care behaviors and understanding the interrelationship of these behaviors are the first steps in preparing instructional objectives for severely handicapped children. Especially important for older children is the assessment of their potential to perform prevocational tasks. Because there is no one assessment instruction that can appropriately assess the abilities of children who exhibit multiple disabilities, teachers and diagnosticians must refine their powers of observation and knowledge of child development. A wide variety of assessment tools must be used as a basis from which to determine functioning levels in the behavioral domains, as well as in each child's learning process. The primary objective of assessment is to program, and for that reason, observational data should focus on a multitude of variables related to how the child performs a task rather than on whether the child succeeded or failed. Observation of the following variables is essential in order to design teaching strategies for individual children.

1. CHILD'S HANDICAPPING CONDITIONS: What emotional, sensory, physical, and mental impairments are present?

2. PRIMARY HANDICAPPING CONDITION: Of all the impairments present, which is the one that is most impeding the child's learning?

3. LEARNING STRATEGY: How does the child approach a task? Does he or she perform only motorically, does he or she explore, bang materials, rely on form, color, pictures? Does he or she use foresight or trial-and-error to solve problems?

4. PRIMARY LEARNING MODE: Does the child learn primarily through vision, audition, or tactile feedback?

5. CHILD'S LEVEL OF COMPREHENSION: How does the child best understand the expectations of the task? A hierarchical sequence from the most to the least amount of assistance is as follows:

    Total physical guidance
    Tactile, visual, verbal prompts
    Tactile and visual prompts
    Tactile prompts
    Visual prompts
    Demonstration
    Verbal prompts
    Verbal directions

6. EFFECTIVE REINFORCERS: Does the child respond to food, social, verbal, or toy reinforcement? Which is the most effective in changing his or her behavior?

7. RATE OF LEARNING: Having selected one task to teach to the child, the observer should note how many trials were necessary before the child could learn the correct response.

8. MOST AND LEAST PREFERRED ACTIVITIES/MATERIALS: Which materials or activities held the child's attention? Which materials or activities did the child reject or focus on for the least amount of time?

9. WHAT ARE STRENGTHS/WEAKNESSES: Which areas of development in each domain evidenced the most accomplishment, the least accomplishment, i.e., motor planning, construction of objects in space, discrimination seriation, wrist rotation.

10. DEVELOPMENTAL LEVEL: Where is the child functioning in comparision to children developing normally? Are his or her skills a 10-month-old's or a 24-month-old's?

Before selecting a battery of assessment tools for a child, the teacher or diagnostician should first screen the child to determine which tests will most appropriately evaluate the child's skills. One such screening instrument designed specifically for children with visual and/or auditory impairments is the Developmental Activities Screening Inventory (DASI). A nonverbal scale, the DASI is based on normal development and assesses behaviors between six and 60 months and measures skills such as means-ends relationships, memory, quantitative, discrimination, object concept, imitation, spatial and seriation relationships, and association. Commercially available through Teaching Resources, the materials in the DASI may be found in any classroom. Two unique advantages of the DASI are that it may be administered to totally blind children and, for each skill assessed, specific training guidelines and procedures are suggested in the instructor's manual. Other advantages of the DASI are that it is untimed, may be administered in several sessions, and may be administered by teachers and paraprofessionals.

Effects of Deafness and Blindness on Learning

Applicable to deaf-blind children who function primarily within the sensori-motor stage is Stephens (1977) assumption that the training of children who function similarly will focus on communication, self-care, and rudimentary vocational skills. Her proposal that these skills develop from two early and basic behaviors, eye-hand coordination and memory for the anticipation of recurring events, can serve as a basis from which to begin considering some critical issues relevant to the topic of cognitive, linguistic, and motoric development of the deaf-blind child. Before progressing further, a definition of the sensori-motor period is in order. From birth through the first 24 months of life, children primarily experience their surroundings via sensory and motor impressions. Within this time period, three major accomplishments occur: (1) children begin to integrate all their sensory and motor impressions for problem-solving behaviors, (2) they learn that the world is a permanent place, and (3) they begin to develop goal-directed behaviors. Thus, the child's first knowledge about his or her world is acquired during this sensorimotor stage of development.

Norris, Spaulding, and Brodie (1957) discussed the importance of both the timing of learning and the opportunity available to develop a particular skill or set of behaviors. Their insight into these aspects of skill acquisition is particularly relevant when reviewing the developmental process of the multiply handicapped child. The neuropsychological development of any child is directly dependent upon his or her participation in appropriate experiences at all stages of growth. The acquisition of any skill is related to the child's state of readiness and his or her opportunity to develop and practice new behaviors. When opportunities are available at the time of maximum readiness, skills are rapidly acquired through trial and error and subsequent practice. If the opportunities are not appropriate for a specific skill to emerge when the child is most ready to develop it (the teachable moment), the child may have difficulty developing the skills at a later time. The more time that elapses between the period of optimal mental and physical readiness and the time when the opportunity for learning is provided, the greater the difficulties in acquiring a new behavior become. Significant in the sensorimotor period are the limitations imposed by sensory impairment on the timing of learning adaptive behaviors that are dependent on intact sensory and motor functions. Uzgiris and Hunt (1975) devised a Piagetian framework from which to analyze six major stages of development during the first 24 months of life and from which evolve more complex mental and motor behaviors. This framework will serve as a model on which to demonstrate the effects that sensory deficits such as deafness and blindness impose on early cognitive-adaptive progression. When one knows the stages described by Uzgiris and Hunt and the activities common to each stage, one can apply them to deaf-blind children in identifying specific developmental strengths, gaps, and deficits in their learning process.

The first stage, <u>visual pursuit and permanence of objects</u>,

begins with looking and leads to the discovery that an object is present even when it is not in direct view. This concept progresses through the pursuit of slowly moving objects, lingering of a glance at the point of disappearance of an object, acquisition of a partially hidden object, and the pursuit of an object displaced behind one of several barriers.

Consider the likeliness of a partially sighted or totally blind child's orienting toward a light or object and tracking the stimulus through a 180° arc. He or she may not perceive the total object, or his or her perception of its image may be distorted. If the object is not recognized as a whole, what are the child's chances of identifying it as the same object upon viewing only part of it extending from under a cloth? If he or she is unable to track the object in order to pursue its path of travel, how will the child know where it has or even <u>that</u> it has disappeared, much less project its position of reappearance? The blind child has no way of knowing that the object is still there once it is removed from his or her touch; thus, he or she does not search for it. A common misconception regarding the abilities of blind children is that hearing automatically compensates for the lack of vision. Fraiberg (1977) pointed out that sound does not alert the blind child that something heard is something to be grasped until eight to 12 months of age. Not only is the blind child's concept of object permanence delayed as much as one year, but this delay also inhibits his or her mobility. Until blind children reach on sound cue, they will not creep, and movement either on hand and knees or on feet is delayed four to seven months (Adelson and Fraiberg, 1974). Even at this point, the blind child's teachable moment has been arrested and the effects are seen in delayed integration of motor with auditory schemas for reaching and later for walking. Other implications of visual impairment are seen in early mother-infant bonding and attachment behaviors. Fraiberg (1977) implies that the blind child's lack of eye contact with his or her mother emanates a sense of disinterest for her. She cannot read in the blind child's eyes the discrimination of directed visual gaze and preference for her or for objects that she can read in the eyes of the sighted child. Because blind infants cannot track the comings and goings of their mothers, their knowledge of her existence (person permanence) when she is not in tactual contact with them is delayed, and they become greatly distressed with her absence. Now consider the havoc superimposed on the delays resulting from the visual impairment by the effects of deafness. The deaf-blind child may not hear an object to reach for it or be comforted by his or her mother's voice to ensure her presence!

Development of <u>means for achieving desired environmental events</u> is initiated as the child engages in handwatching behaviors. In this stage, the child begins reaching and grasping when the hand and the object are simultaneously in view, and it is culminated in the infant's ability to manipulate a string or another object to obtain a toy or desired object. It is in this stage that the child comes to appreciate the use of a tool to

obtain desired environmental ends and goal-directed behaviors are initiated. Blind children may not be able to see their hands, much less see an object beyond them. They will not realize their potential to use their hands as a tool for obtaining the object. Deaf-blind children often become so intrigued at observing the effects their hands create with light when waved before their eyes that they do not progress to extending them for manipulation and exploration. Instead, they remain on a self-stimulatory level and do not realize the usefulness of their hands as a means to an end. If children cannot see the relationship of a string attached to an object, how will they understand its role in the acquisition of the object? Fraiberg (1977) informs us that blind children are delayed in mutual fingering of their hands in midline and in the transference of objects, which also contributes to their delay in understanding the utility of their hands as implements for exploring and obtaining objects beyond their reach. When the teachable moment occurred for integrating seeing with reaching and grasping for problem solving, the blind child's body was not ready to assimilate these schemas. Fraiberg's research on the blind children's sequential development of the adaptive use of their hands for directed reach is enumerated by Fieber (1977, p. 229):

Table 1

Sequence of Development of Directed Reach in Blind Infant According to Fraiberg

23-28 wks.	Hand pantomimes action briefly when grasped object is withdrawn
	Object sounded, without previous manipulation, no response
	Object touched to fingers, hand explored and grasps
	Object sounded, after previous manipulation, no response
	Does not yet search tactilely when lost object.
27-36 wks.	Object touched to hand, beginning search
	Beginning random search in place expects object to be
	Accidental contact results in grasp, then shakes, etc.
	Object sounded, after previous manipulation, hand seems to activate in grasp movement, but no search; however, head seems to orient to sound occasionally
	Repeats guided familiar banging object, kinesthetic memory
	Patty-cakes on verbal cue
	Stereognosis--recognizes cup manually and takes to mouth.
37-48 wks.	Object sounded, after previous manipulation, occasionally able to reach to it
	Reaches where last had contact with object

Object sounded, with previous manipulation, see grasp motion but no search
Protests removal of object
Examines tactually and reorients. Discriminates and shows preference.
When toy withdrawn, hand follows

49 wks. Reaches to sound cue alone
Begins to move into space to sound and develops space map

Evolving from the same set of behaviors as the concept of means-ends relationships, causality grows out of the child's desire to retain pleasurable stimuli. Initially, the child maintains an object in motion by kicking, shaking, and striking or swiping motions and later attempts to reactivate the toy by repeating the previously successful motor behaviors. He or she then recognizes other person's potential to initiate actions, and, eventually looks for the source of activation of unfamiliar toys. While causality also emerges when children watch and manipulate their hands and understand that they can cause something to happen, this concept is differentiated from means-ends relationships in that it is the basis for the development of communication. As children in this stage realize their potential to direct people, via word or sign, to act as a means to an end, they begin to see the relationships of their responses to people and how they effect a reciprocal reaction. For example, he or she learns that, upon waving his or her arms up and down at the termination of an interesting spectacle created by an adult, the adult is likely to interpret the child's reaction as a request for more of the same. The child then begins to build up a vocabulary of gestures and signs to use for achieving different results.

Visually impaired children who do not watch their hands and have already passed the optimum time for employing hearing for directed reach will similarly be delayed in swiping at objects to produce an effect. Deaf-blind children are unable to see or hear the results of their actions and will not be motivated to repeat them. Blind children will not be able to distinguish visually the appropriate action to apply to a particular stimulus nor to discover the activating principle of a novel toy. If deaf-blind children are entranced with flicking objects before their eyes, they will not use their hands to communicate with others, either by touching to reinstate an action or by signing to convey an idea. They may not understand that another person can be used to achieve a desired result, and thus, they will have no basis for seeking a reciprocal relationship. The teachable moment has passed for understanding that movement can be used for a variety of purposes from discovery and problem-solving to communication. Fraiberg's (1977) research indicated that while blind children vocalize in response to their mother's voice, they do not employ vocalizations to initiate social interactions. Imagine the mother's distress and her reactions to the infant who makes no effort to engage his or her mother in social reciprocity. The teachable moment for establishing attachment bonds essential for the emergence of meaningful communication has

passed, and its effects are seen in the deaf-blind child's preference to obtain things him or herself rather than to communicate with another person.

The development of schemas for relating to objects and object concept emerges when children coordinate seeing, hearing, and sucking with grasping to suck their thumbs, bring their hands and objects before their eyes, and shake and bang rattles to explore orally, visually, and auditorially. The infant then becomes interested in showing objects to others and in finding them as they are named. Through manipulation of various types of toys, the child learns that different actions produce different results and learns to discriminate which behavioral schemas to apply to specific toys. The discovery of the properties of objects helps in his or her formation on what to do with them. Soft, squeaky toys are for squeezing, and elongated hard rattles are for shaking up and down. Once children understand the functions of objects and how to use them, they can then acquire a label to represent them. As they learn through their actions that some objects receive action and that others cause action, children begin to form the groundwork for the establishment of subject-predicate utterances. In this stage children begin to discover that various types of objects share the same attributes, and they begin to discriminate and associate new and similar characteristics for classification and generalization skills.

Already having passed the most optimum time for developing behaviors dependent upon vision and movement, blind children are delayed even further in recognition and exploration of objects and their environment. They do not show or offer objects to others and thus, have no opportunity to perceive labels applied to their emerging ability to share an idea. Limited in mobility, blind children will not explore various rooms of the house to know what is in them or to touch objects to have them labeled. They must wait for others to bring things to them. They do not see the similarities in objects in order to generalize an old concept to a new material. They may be confused about the meaning of words, as they do not perceive large objects as an integrated whole. They feel four legs, fur, and something that runs. Is it a dog, a cat, a rabbit? Their images may be distorted, and their perceptions may not match their previous conceptual data. Deaf children will babble until six months of age, but if they do not perceive any feedback from their vocalizations, they will extinguish. The effects of deafness further emerge with the child's inability to perceive labels for objects, resulting in severe language and conceptual delays. Deaf-blind children will use objects for self-stimulation if they are not shown how objects are used and encouraged to begin to store an array of images that will help them begin to classify objects according to their function.

The fifth stage, construction of objects in space, emerges with the child's coordinating looking and listening behaviors. Infants seek to orient visually to sound sources, to attend selectively to visual stimuli, to search for dropped toys, and to attack or circumvent barriers to retrieve hidden objects. As they move in space and explore objects, infants begin to realize that an object is the same regardless of its position in space.

They identify their bottle even if they see it upside down. Later they integrate their impressions of different movements and objects and begin to experiment with combining two or more objects, to release cubes into cans, stir spoons in cups, and to bang sticks on pans. They learn how to orient objects in order to balance one on top of another and to realize how much space must be taken up before blocks spill over as they fill a box with them. They learn how to turn their bodies to move in and out of spaces and to understand the properties of gravity.

Because opportunities to integrate visual and auditory sensory impressions are first seen in this stage, the effect of deafness and blindness on the concept of space is overwhelming. Children do not hear objects to orient visually to them nor may they see well enough to attend selectively visually when two objects are simultaneously presented in their visual field. They may not observe objects as they fall, nor attend to their sound as they strike a surface. Since they have not followed the path of an object nor realize the existence of a barrier behind which a ball has rolled, they are limited in their opportunity to practice problem-solving abilities to circumvent the chair with a tool in order to retrieve the ball. Sound cues to stimulate mobility may not suffice in deaf-blind children because they may lack adequate sensory perceptors to be motivated either by sound or movement. Associating auditory stimuli with its source and integration of gross-motor movements are delayed as a result of limited experiential opportunities and the multiplicative effects of their impairments.

Without adequate vision to monitor the placement of pegs, blocks, puzzle pieces, and writing implements, the child will over or under-reach his or her goal and may not be able to copy a stimulus or to discriminate directionality. Depth perception and receipt and propulsion skills are frequently areas of concern in deaf-blind children, the result of their confusion over the relationship of their bodies in space.

The development of <u>imitation</u> emerges in two forms, verbal and gestural, both of which progress through a series of stages. Infants' interest in sound and their own vocal mechanisms motivate them to refine their verbal imitations first through approximations and then through direct imitations of words in their receptive repertoires. Similar progression is seen in infants' acquisition of gestural imitations. First developed are simple, gross-motor imitations they can already perform. Imitations of novel gestures they can see their body perform are followed by ones which they cannot see their body enact, such as tugging on their ears and clapping their hands behind their backs. As children observe the adults around them, they learn to imitate their actions with objects and can repeat these actions at a later time in deferred imitative activities. Little girls use mudpies to imitate their mother's cookie baking; little boys use popsicle sticks to stimulate their father's cigars. Through this form of representational play, children learn to manipulate symbols.

The effects of passing the teachable moment for acquiring imitation skills are reflected in the deaf child's delayed language development and concept formation. At the time normal-hearing infants' vocalizations are reinforced through caregiver's imitation of their verbal output, deaf infants cease their babbling as a result of impaired sensory receptors to perceive imitative feedback.

Chewing motions, facial expressions, and appropriate postural control must often be taught to multihandicapped blind children because they lack intact sensory perceptors to learn from modeling these behaviors. Although blind infants smile in response to their mother's voice, Fraiberg (1977) tells us that only tickling and nuzzling can regularly elicit a smile from blind infants. Their faces are often void of expression, and the mother must often teach the child to smile at things he or she enjoys, to frown if he or she has lost something or is unhappy. Blind children do not observe other's gaits as they walk, and their outward toeing, combined with a downward posture of their heads, instantly reveal their sensory deficits to others around them. When their bodies are ready to chew, the blind child does not have available models of the action and may have been frightened at the new textures. Remaining on pureed foods until nine years of age is not atypical of deaf-blind children who have not had the opportunity to chew reinforced in the home and school. Lack of visual attention to the details of the hands may inhibit deaf-blind children's imitations of signs for communication, even though motorically they may be ready to produce the hand configurations. Unless deaf-blind children learn to produce signs to express ideas that are not visually present or evoked through a physical need, they will remain at a signal level of communication. Since these children rarely engage in representational play, their potential to communicate on a symbolic level is highly speculative.

In the normal child all these stages emerge simultaneously to enable the child to integrate experiences for problem solving and generalization. For instance, if normal children are presented with a toy having features with which the children are unfamiliar, the children will progress through a series of mental and sensory operations before they can activate the toy. They must first discover which end to hold (construction of objects in space). Next, they must understand the function of the object (object concept). They must search for the means of activation (causality and means-ends relationships) or for someone to show them how to activate the object (imitation). Once the children observe how to hold the object, where to activate it, the purpose of the object, and how to operate it, they must remember the series of steps required to reactivate the object (object permanence). For children who have two impaired sensory modalities, this is no easy task. They must be physically guided to explore, be given a variety of experiences that share the same properties and attributes to facilitate generalization skills; distinguishing characteristics of sound, shape, form, and color must be adapted to a mode that best elicits the children's maximum perception of sensory information for learning to problem solve and adapt to

their environment. When behaviors are introduced on a level that they can understand in all areas of early developmental skills--visual pursuit and permanence of objects, causality and means-ends relationships, and construction of objects in space--deaf-blind children can be taught to realize their maximum potential to function as an independent and contributing member of society, regardless of the extent of their visual or auditory impairments.

The importance of the sequential development skills in all areas of the sensori-motor period is reflected in Table 2. From this schematic overview, the reader can begin to understand how splinter skills are developed in children who have not acquired basic sensori-motor concepts. The child without a good grasp of object permanence will not develop good memory skills. If a child has had limited opportunities to explore objects, he or she will have difficulty discriminating and associating concepts for classification purposes. Lack of experience with relating objects, exploring various containers, and restricted movement through space will interfere with the feedback system that helps the child monitor and adjust his or her reach into the organization of space, the understanding of size and number, and the anticipation of recurring and sequential events. Without the understanding of how to imitate in order to learn means-ends relationships and to realize how to initiate changes in their environments, children will not develop a storage and retrieval system of symbols essential for reasoning, problem solving, and communication. Integration of all these skills is critical for teaching the visually impaired child learning strategies and problem-solving approaches.

Assessment of Language

Few language scales exist that functionally tap the communication abilities of severely handicapped children. Most are deficient in their potential to measure all the primary areas of language behavior described by McLean and Snyder (1977) in their transactional model for the assessment of language.

1. Is the child organically intact for sensation, perception, and production of a language system?

2. Does the child have a cognitive base for language?
   a. Level of cognitive organization
   b. Concept base
   c. Semantic relational concepts
   d. Individual child's unique or idiosyncratic concepts, interactive strategies, and preferences

3. Does the child have a social base for language?
   a. Level of socialization
   b. Preverbal communicative behaviors
   c. Specific interactive behavior

4. Receptive Linguistic Skills
   a. Ability to discriminate between meaningful units of the language system
   b. Phonemic and paralinguistic comprehension
   c. Semantic-lexical comprehension
   d. Syntactic-grammatical comprehension

5. Expressive Linguistic Skills
   a. Single word utterances
   b. Transition to grammar
   c. Two- and three-word utterances
   d. Extension and syntactic refinement of multiword grammatical utterances

Two instruments which have been valuable tools in the assessment of the various phases of language acquisition are the Environmental Prelanguage Battery (Horstmeir & McDonald, 1975) and the Sequenced Inventory of Communication Development (Headric, Prather, & Tobin, 1975).

The Environmental Prelanguage Battery (EPB) was designed specifically for children with language delays and is one of the few instruments available that looks at the prerequisites essential for language development. The EPB taps the child's knowledge of the functional use of objects, gross-motor imitation, and the comprehension and expression of one-word utterances and two-word combinations. Subtests that comprise the EPB are:

1. Functional play with objects
2. Motor imitation
3. Receptive identification of objects
4. Receptive identification of pictures
5. Receptive understanding of action verbs
6. Sound imitation
7. Noun imitation
8. Noun production
9. Action verb imitation
10. Action verb production
11. Two-word phrase imitation
12. Two or more word phrase imitation

Major advantages of the EPB are that pretest training trials are provided prior to each subtest to ensure that the child understands the expected response pattern; the materials used in the test are common household objects and toys; and a training manual, Ready, Set, Go, Talk to Me, has been designed to facilitate every skill assessed by the EPB. Figure 1 depicts a sample training trial.

Insert Figure 1 about here

The Sequenced Inventory of Communication Development (SICD), which assesses skills between four and 48 months, is unique in its division of receptive and expressive communication skills. Encompassed within the Receptive Scale is the assessment of auditory awareness of both sound and speech and understanding of one or more words and word groups. Included in the Expressive Scale are an articulation inventory; imitation of motor, vocal, and verbal behaviors; the initiation of motor, vocal, and verbal behaviors; response patterns to vocal and verbal behaviors; and the measurement of spontaneous language. Unique to this scale is the assessment of a child's language as reported by primary caregivers with a differential assigned age placement for "reported" behaviors. Advantages are that there are separate booklets for receptive and expressive scales, stimuli are functional in terms of asking children about experiences within their repertoire, a spontaneous language sample is built into the test, a mean length of utterance and developmental age scores are obtained, and the entire scale is adaptable to totally blind children. Figures 2 and 3 are taken from the receptive and expressive protocals of the SICD.

Insert Figures 2 and 3 about here

Because few multihandicapped children will ever attain verbal language, the ability to program for language development in this population must necessarily stem from the assessment of their nonverbal communication skills. Severely handicapped children can learn to convey basic needs (communicate) but to do so they must be cognizant of the utility of a cry, a gesture, or a sign.

Essential to the acquisition of language is the opportunity to explore the environment through as many modalities as the child has available. Children actively experience a concept in a concrete situation before they acquire a means of conveying that concept to someone else. All children must pass through a sequential progression of behaviors before their experience becomes a concept they can communicate on a symbolic level. Before a child can communicate symbolically, he or she must demonstrate the following prerequisite behaviors:

1. Attend to a stimulus
2. Realize that things exist in space
3. Realize that he or she is separate from the environment
4. Realize that he or she can make things happen

5. Realize that others can make things happen
6. Be interested in movement for the purpose of communicating a need
7. Have a concept to share
8. Have a means for sharing the concept

Figure 4 portrays the interrelationship of sensori-motor cognitive skills and the acquisition of language.

Insert Figure 4 about here

Accomplishment of all stages of the progression is dependent upon intact sensory, motor, and organizational systems, and one or all of these systems are impaired in the multiply handicapped. The cognitive gaps that accrue as a result of these impairments will inhibit the integration of experiences for their transition from a sensation to a symbolic level and the fine-motor production of language, whether oral or manual.

Assessing the level of communication skills in children who will rarely reach a symbolic stage must primarily lie in the level of signaling behavior at which the inhibition occurs. The primary difference between a signal and a symbol is the state of the referent (object, person, situation) about which the child is communicating. Only when the referent is not in the direct physical contact or visual presence of the child can the message be on a symbolic level (Morehead & Morehead, 1974), and only when the child functions on a symbolic level can his or her language expand into more complex syntactical structures.

The Gestural Approach to Thought and Expression (GATE) (Langley, 1976) was developed specifically for the assessment of nonverbal communicative attempts. The purpose of the GATE, which assesses nonverbal communicative skills between birth and three years of age, is multifold:

1. To obtain an estimate of a nonverbal child's communicative abilities
2. To determine where the child functions in the prerequisite cognitive areas necessary for sign acquisition
3. To determine the child's potential for sign acquisition
4. To determine where the child functions in the sequence of sign acquisition
5. To serve as a guideline for planning the sequence of teaching strategies that will facilitate the development of more complex signing behaviors.

The GATE was designed to be an observational tool for teachers and educational diagnosticians who have opportunities to observe a child's communication strategies over a period of time. The child's natural environment is the intended locale for use of the GATE so that one may obtain a measurement of the child's maximum functional communication skills.

Assessment of Motor Skills

Maturation and coordination of both small- and large-muscle groups are critical to the development of language, self-care, and socialization behaviors. Assessment of motoric abilities of severely handicapped children often must take place on a reflexive level. Children who retain primitive reflex patterns frequently lack efficient muscular coordination necessary for speech, feeding, dressing, and grooming, and for opportunities to explore and interact with toys and people. Their limited range of motion necessitates dependency on others to have their physical needs satisfied and their communication attempts comprehended. Socialization opportunities through active play with peers are severely impeded. While they can learn by watching others manipulate toys, severely physically handicapped children can never receive the richness of information that would be processed from active tactile and proprioceptive feedback. Particularly relevant to the fine-motor assessment of severely handicapped children is the distinction between perceptual motor performance and neurological maturation of the small muscles. In the former, one is assessing the child's ability to reason cognitively, organize space, and plan a sequence of movement; in the latter, the assessment focuses on how the child coordinates the movements and the degree of neurological organization and development of the muscles in the fingers, wrist, and forearm.

The acquisition of all motor movements stems from early reflexive patterns. Johnston (1976) defines a reflex as a "specific automatic patterned motor response which is induced by a particular stimulus and does not involve any voluntary or conscious control". When these early patterns fail to evolve into more mature movement sequences during specific stages of development, they become abnormal, and they inhibit, rather than facilitate these processes. Although a physical and an occupational therapist usually are responsible for the supervision of motor assessments focusing on neuromotor development or for the actual assessment themselves, teachers and diagnosticians should be alert to the implication of the retention of reflex patterns for positioning, facilitating normal postural reactions, and sequencing developmental motor activities in the classroom.

Formal measures designed to assess neuromotor development and early motor patterns include the Cerebral Palsy Assessment Chart (Semans, Phillips, Romanoli, Miller, & Skillen, 1965), The Primitive Reflex Profile (Capute, Accardo, Vining, Rubenstein, & Harryman, 1978), the Milani-Comparetti Development Chart (Milani-

Comparetti and Gidoni, 1967), and the Newington Hospital Reflex Testing Chart (Fiorentino, 1974). The reader interested in reflex development and the influence of reflexes on postural tone and postural reactions is referred to Bobath (1967), Buttram and Brown (1976), Kline (1977), Johnson (1978), and Johnston (1976). Major reflex patterns are presented in Figure 5, and primary postural reactions can be seen in Figure 6.

Insert Figures 5 and 6 about here

Table 2 represents the motor milestones that are inhibited when these seven major reflex patterns are retained, and Table 3 indicates the postural reactions necessary for the acquisition of basic motor milestones.

Insert Tables 2 and 3 about here

Stone (1977, pp. 75-76) suggests a comprehensive model for assessing the functional components of motor skills based on the neurodevelopmental approach advocated by the Bobaths of England. This model encompasses four major areas:

Unstructured Positioning

1. Observations of child in supine, prone, sidelying, sitting, and standing.
2. Observations of body asymmetries in structure and alignment of trunk and extremities.
3. Observations of tendencies to maintain specific postures.

Tone and Range of Motion

1. Postural tone assessed in supine, prone, sidelying, sitting, and standing.
2. Determination of presence of contractures.
3. Observations of limitations due to spasticity or immobility.

Developmental Movement Patterns

1. Does child move the limbs separately or as a single unit?
2. Does child use trunk rotation?
3. How do child's movement patterns affect his or her overall functioning?
4. How does child assume a position?
5. How is child able to maintain a position?

Manipulative Skills

1. Are hands always fisted or can child voluntarily open and close them?
2. Can child grasp objects and bring them to his or her mouth?
3. Does child have independent movement of the fingers?
4. Does child look at objects he or she picks up?
5. Is child able to manipulate toys and explore objects with his or her fingers?
6. Are child's inabilities in manipulative skills related to motor dysfunction or adaptive behavior?

Banus (1971) designed a comprehensive model that enables the teacher and diagnostician to specifically focus on strategies for resolving the last issue presented by Stone. Eye-hand coordination assessment is divided into two aspects: planning, which is the cognitive portion of the assessment, and accuracy, which represents the process of movement. Table 4 suggests a workable outline and breakdown of the types of behaviors that should be included in a fine-motor assessment based on Banus' model.

Table 4

Assessment of Fine-Motor Behaviors

I. UNILATERAL SKILLS
   - A. Reach
   - B. Grasp
   - C. Release
   - D. Transfer
   - E. Wrist Rotation
   - F. Strength
   - G. Digit control and flexibility

II. BILATERAL SKILLS
   - A. Parallel movements
   - B. Oppositional movements
   - C. Alternating movements

III. EYE-HAND COORDINATION
   - A. Planning
     1. Organization
     2. Sequencing
     3. Directional Concepts
     4. Initiation
     5. Imitation

B. Accuracy
   1. Overreach
   2. Underreach

C. Rhythm

Ford, in Physically Handicapped Children: A Medical Atlas for Teachers (Bleck & Nagel, 1975) provides an excellent, thorough motor scale for evaluating these aspects of fine-motor skills from birth through 11 years of age. The major subtests of the fine-motor section include Reach/Carry/Bilateral Coordination, Grasp/Placement/Release/Eye-Hand Coordination, Prehension/Thumb-Finger Manipulation, Visual/Visual-Motor/Visual Discrimination/ Spatial Relationships, and Graphics/Drawing/Writing. The most natural and adventitious means of acquiring information about fine-motor behaviors is to observe the child as he or she manipulates specifically selected toys and as he interacts with objects within his everyday environment. Because the way in which a child grasps an object will influence other fine-motor behaviors such as wrist rotation, strength, and digit flexibility, emphasis should focus on the types of grasps he or she applies to different objects: small candies versus one-inch cube, large marker versus spoon. Often grasps are adapted to compensate for lack of finer coordination or intact visual systems. Figure 7 depicts the various types of grasps and their developmental progression. The child who retains a palmar grasp is limited to motion executed at the shoulder and involving the forearm, allowing little or no wrist rotation. If a child manipulates a spoon with a palmar grasp, his or her efforts to scoop will be limited because of the restricted range of rotation at the wrist. More adaptive for this child is a pushing motion with the spoon into his or her food (Bunker, 1978). This is only one example of the progression imposed on self-care skills by the level of grasping behavior.

Insert Figure 7 about here

A variety of activities can be designed to assess fine-motor skills. Wrist rotation can be observed as the child opens doors, operates jack-in-the-boxes, eggbeaters, or Fisher-Price's Teether Clicker. Digit control and flexibility can be assessed by asking the child to wiggle a finger puppet on one extended digit, to tap a desk-type bell with each finger in succession, or to dial a telephone. Parallel movements are those which require the child to move both hands in the same direction at the same time and include throwing a large ball, carrying a large box, or using a rolling pin in clay (Banus, 1971). Activities such as stringing beads, twisting lids from jars, and cutting with scissors require one hand to stabilize

the object while the other hand manipulates it, thus involving oppositional movements. Alternating movements involve rhythm and the same movement of both hands, but in opposition to each other and at different times. These skills can be observed by having a child bounce a slinky on supinated palms, tap a desk bell alternately with each hand, or strike a xylophone with a mallet in each hand performing individually in opposition to the other. Planning and accuracy may be judged across materials as the child manipulates them. The teacher and diagnostician should observe whether the child knows which end of the material to use, the direction in which to proceed, how to initiate the movements, and the sequence of steps necessary to complete the task.

Assessment of Prevocational Skill Readiness

While much attention has been directed toward the training of prevocational abilities in the severely handicapped since the inception of Public Law 94-142 (Mithaug, Hagmeier, & Haring, 1977; Mithaug & Hanawalt, 1977; Wehman, Renzaglia, & Schutz, 1977), there currently exists no comprehensive assessment instrument for the purpose of determining skill readiness for, or skill level of, prevocational abilities in the severely handicapped. Currently available instruments that contain useful subtests applicable to this type of assessment include the AAMD Adaptive Behavior Scales, the TMR and YEMR Performance Profiles, Lakeland Village Adaptive Behavior Grid, and the San Francisco Vocational Competency Scale. These subtests have served as guidelines upon which to base observations for prevocational potential. Tasks were designed in attempts to elicit the behaviors outlined by the various subtests. Mithaug, Hagmeier, and Haring (1977) presented an extremely thorough checklist of behaviors severely handicapped clients should exhibit for entrance into a sheltered workshop.

Assessment of a child's potential and readiness for prevocational skills may be initiated by teaching a child a minimum of three novel tasks that encompass learning components of left to right progression, disassembly, one-to-one correspondence, and assembly. Major observations of the child's performance should focus on variables outlined in the San Francisco Vocational Competency Scale:

1. Time in completing a task
2. Time in learning a task
3. Does performance improve with experience?
4. Can the child correct errors?
5. Can the child transfer a skill to different materials?
6. Will the child initiate the task?
7. Can the child recall the sequence of the steps?
8. Can the child ask or does he or she look for more materials when the supply has run out?
9. Can the child perform accurately?

10. Can the child seek help with a task?
11. How much assistance does the child need?
12. How many steps can the child follow or recall?
13. What motor skills does the child have?

Opportunities should be structured that permit observations of how the child reorients over time to a task and how much of the task he or she recalls. Regardless of the materials used, the teacher or diagnostician should evaluate how the child performs according to the points enumerated above. Three tasks which lend themselves to relatively easy instruction for the purpose of assessing prevocational potential are (1) having the child nest, in a left-to-right direction, cups that are graded in size; (2) sorting inch-cubes into individual compartments in an egg carton; and (3) twisting off nuts from bolts and sorting the two pieces into separate containers.

Judicial selection of a variety of instruments and subtests coupled with refined observational techniques and a knowledge of developmental progression will enable teachers and diagnosticians to plan individualized programs to facilitate motor, linguistic, and cognitive skills necessary for independence, socialization, and prevocational skills.

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FIGURE 1: Pretraining procedure: Environmental Prelanguage Battery

NON-VERBAL SECTION

TEST 1 FUNCTIONAL PLAY WITH OBJECTS

Materials: Comb, brush, spoon, dish, doll, washcloth, truck, crayon, paper, toy car, small block, hat, book, cup.

Pretrial Training

1. Put one set of objects in front of the child, tell him to play with them, and observe what he does. (Step 1 is not necessary if the three screening items have been given)

2. If the child is not successful, (see definitions on score sheet), model a correct response for him. If he is then able to play functionally with the object(s), write with model in the TRAINING column on the recording form.

3. If the child does not imitate your model, physically hold his hand and help him to do the action (physical prompt). If he does not resist your help and watches the action, write physical prompt in the TRAINING column.

4. If the child was successful with the model or the physical prompt, repeat Step 1, test procedure with that object to see if he can play functionally without any help. If he succeeds, check the CORRECT column.

5. Proceed with all three pretrial items as explained above. If the child does any items correctly after training, proceed to the six test items. If there are no correct items after pre-trial training, the child has failed that level.

Pre-trial

	C	Training	I	N.R.
1. Comb and brush				
2. Truck and block				
3. Book				
Total				

C = CORRECT: Using the object, when first introduced, in a manner in which adults assume the object should be used. This includes definite creative usage.

I = INCORRECT: Throwing, banging, mouthing, etc., of the objects inappropriately.

NR = NO RESPONSE: No use of the toy or a mere touching of it.

Taken from Horstmeier, D.S., & MacDonald, J.D. The environmental prelanguage battery. Ohio: Charles E. Merrill, 1978

FIGURE 2: Protocol for the Sequenced Inventory of Communication Development

RECEPTIVE PROFILE

Ages	Awareness		Discrimination		Understanding	
	Sound	Speech	Sound	Speech	Word +	Words
4 mo	1 PR					
8 mo	4(a) 4(b) 4(c) 4(d)	2 3 (b)		5(a)		
12 mo		3 (a)		5(b)	6(a) PR	
16 mo			7 PR		6(b)	8(a) PR 8(b) PR 8(c) PR 8(d) PR 11(b) PR
20 mo					9 10 12(a)	8(e) PR 8(f) PR 8(g) PR 13(a) PR 13(b) PR 13(c) PR 13(d) PR 13(e) PR 14(a) 14(b) PR
24 mo				15(a) 15(b) 15(c)	12(b) 16	8(h) PR 8(i) PR 8(j) PR 11(a) 13(b) 13(c) 13(d) 13(e) 17(b)
28 mo				15(d) 15(e) 15(f)	12(c)	13(a) 18 19(a) 20(a)

10

Taken from Headric, D.L.Prather, E.M., & Tobin, A.R. The Sequenced Inventory of Communication Development. Seattle, Wash.: University of Washington Press, 1975.

FIGURE 3: Protocol for the Sequenced Inventory of Communication Development

EXPRESSIVE PROFILE

Ages	Expressive Behaviors								Expressive Measurements	
	Imitation			Initiating			Responsive		Verbal Output	
	Motor	Vocal	Verbal	Motor	Vocal	Verbal	Vocal	Verbal	Quantitative	Descriptive
4 mo					1 PR 2 PR 6 PR 7 PR		3 PR 4 PR 5 PR 8 PR			
8 mo					10 PR	9(a) PR 9(b) PR				
12 mo	14(d) PR 14(e) PR	11 PR				9(c) PR 9(d) PR				
16 mo	14(a) PR 14(a)				12 PR	13 PR				
20 mo	14(b) 14(b) PR 14(c) PR	15(a) PR 15(b) PR 15(c) PR 18 PR				16 PR		17 PR		
24 mo				19 PR 21(a)		21(b)		20 PR 22(a)	MLR = 2.00 Sd = .52 SCS = 5.69 Sd = 4.23	47
28 mo			23 24 25(a) 25(b) 25(c) 25(d) 26(a) 26(b) 30(a)			27 PR 28 PR		22(b) 22(c) 29 PR	MLR = 2.52 Sd = .74 SCS = 13.12 Sd = 8.78	48 49 50
32 mo	14(c) 14(d) 14(e)	15(a) 15(b)	30(d)					29(a) 29(b) 31(s) 32	MLR = 3.46 Sd = .82 SCS = 19.0 Sd = 11.86	51 52 53 54

10

Taken from Headric, D.L., Prather, E.M., & Tobin, A.R. The Sequenced Inventory of Communication Development. Seattle, Wash.: University Of Washington Press, 1975.

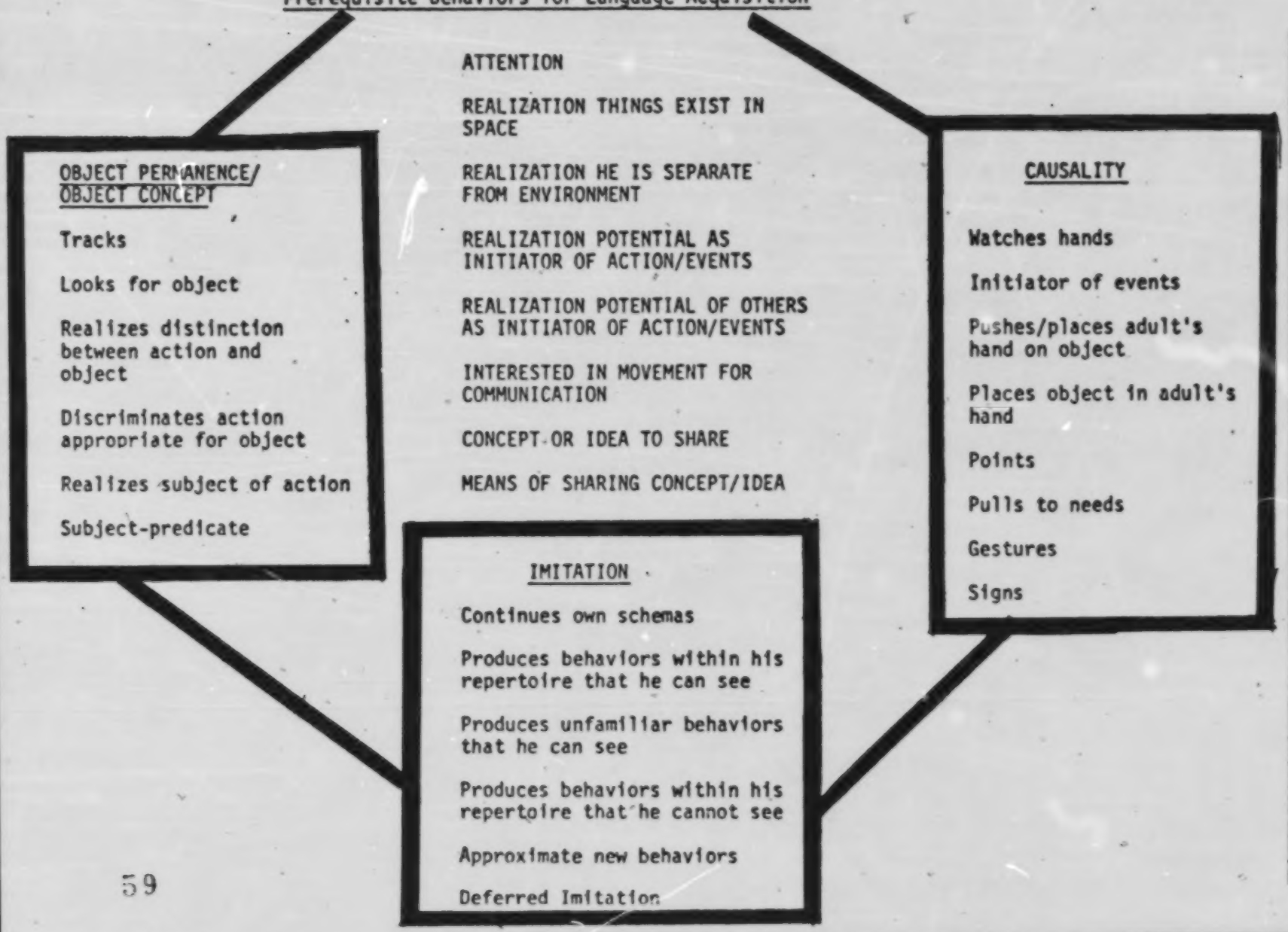


FIGURE 4: Conceptual framework for assessing nonverbal communication

FIGURE 5: Major reflex patterns inhibiting the acquisition of motoric milestones

TONIC LABYRINTHINE NECK REFLEX

NECK RIGHTING REFLEX

ASSYMMETRICAL TONIC NECK REFLEX

61

GRASP REFLEX

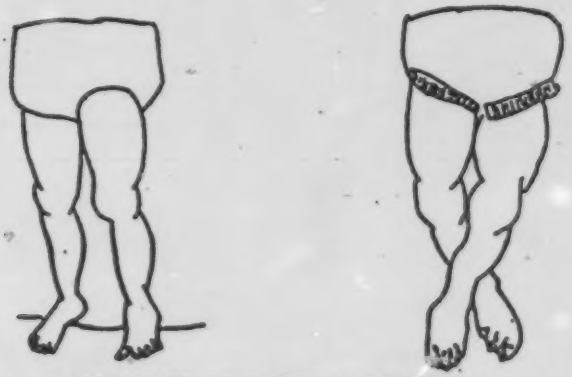
MORO REFLEX

MORO REFLEX

62

FIGURE 5 Continued

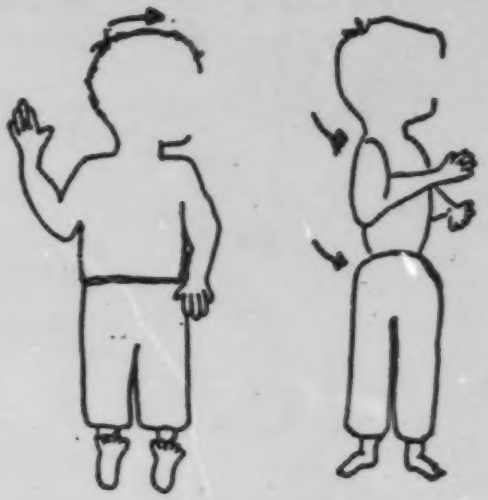
SYMMETRICAL TONIC NECK REFLEX



POSITIVE SUPPORTING REACTION

FIGURE 6: Major postural reactions

OPTICAL AND LABYRINTHINE RIGHTING



BODY RIGHTING ON THE BODY

LANDAU

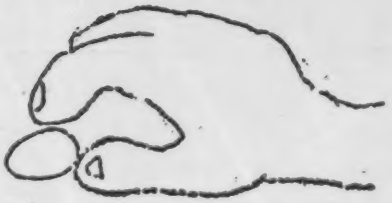
ULNAR-PALMAR--5 months

PALMAR--6 months

RADIAL-PALMAR--7 months

SCISSORS--8 months

RADIAL-DIGITAL--9 months



INFERIOR PINCER--10 months

NEAT PINCER--12 months

Figure 7: The developmental progression of grasping behaviors

TABLE 2

THE INFLUENCE OF PRIMITIVE REFLEX PATTERNS ON MOTORIC MILESTONES

Acquisition of basic motor patterns is dependent upon the integration of the following primitive reflexes into higher level movement behaviors.

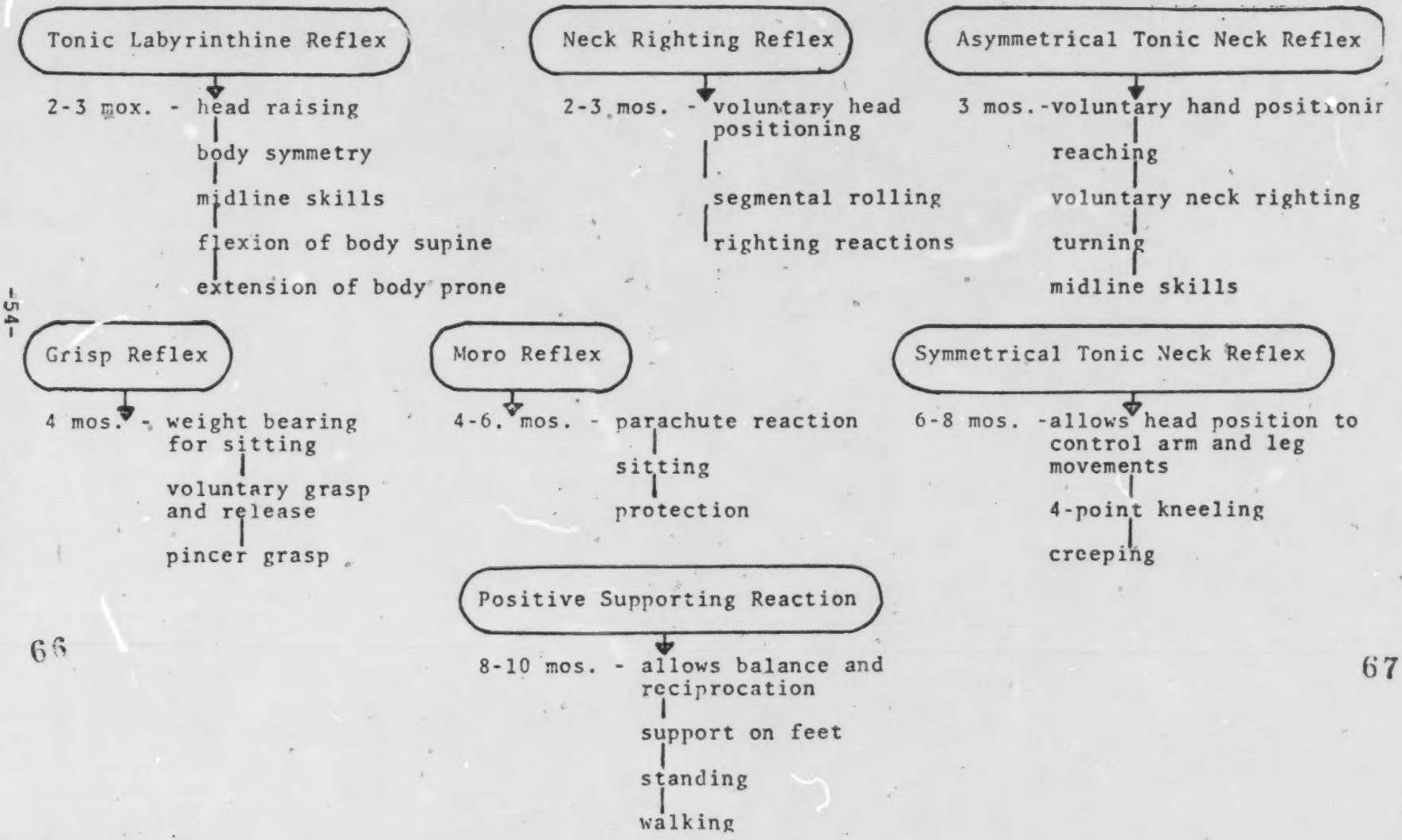


TABLE 3

Motor behaviors critical to the development of postural reactions

Acquisition of basic motor patterns is simultaneously dependent upon the occurance of the following postural reactions:

Optical and Labyrinthine Righting

- 3 mos. - extends head in prone
- supports on elbows
- 5 mos. - rights head in supine
- turns from supine to prone
- 6 mos. - pulls to sitting

Body Righting on Body

- 6 mos. - allows rotation around body axis (segmental rolling)
- 8 mos. - equilibrium reactions

Landau

- 5 mos. - increases extensor tone
- prone on extended elbows
- rocking in preparation for creeping
- 8 mos. - standing
- 12-14 mos. - walking

Parachute

- 6 mos. - allows weightbearing in sitting position
- protection from losing balance
- 8 mos. - creeping

FAMILY SERVICES

PARENT INVOLVEMENT

Muriel Mei-ton Yu

The presence of a handicapped child in any family results in intense emotional reactions by the parents. Just accepting the fact that one's child is handicapped can be a traumatic experience, particularly in our western civilization, where such a high premium is placed on intellectual and educational achievement. It is not uncommon for parents to have to gradually give up often realistic expectations for normal children who fail to meet those expectations. Parents who receive a diagnosis of a handicapped child have their hopes and plans for the child brought to an abrupt end in an instant. Shock, denial, distress, anger, guilt, grief, and finally withdrawal are the feelings often expressed by these parents.

Many stresses facing the parents of severely handicapped children are physical in nature. The result of having the responsibility for the total care of the child 24 hours a day. In the case of a deaf-blind, multi-handicapped child, the problem is compounded due to the child's usual severe poor health and sensory losses. Economic pressures such as increased medical and education costs, expenses for therapy and for prosthetic devices, and loss of time for clinic appointments are added causes for stress. In addition, since one of the typical characteristics of deaf-blind children is their touch-me-not or "affectionlessness" disposition, an early mother-child bounding relationship has been difficult for some to establish. Given this background information, it is easier to see why the parents of severely handicapped children found their task of coping and adjusting such a difficult one, and they require and need all kinds of support from all of us.

As a social worker in deaf-blind program, I have seen many dedicated teachers and therapists working with these severely impaired children, and I admire them for their patience, dedication, and perseverance. My primary work was with parents of these children, and I was often told by my collegues that they would not wish to change places with me. I was glad, for I couldn't possibly do what you educators and therapists do. These children are all so different, and most of them do not fit into any existing learning and developmental theories. So it is forever your task to struggle to find new ways in working with them. What determination you have!

But today, for a change, you won't be worried about the children. Instead, we'll be talking about how educators help the parents of these children. Many of you have had experience in working with parents, so perhaps you can share with us some of the things that have helped you. I would like us to gain insight

as to what it is like to be the parents of a deaf-blind, multi-handicapped child. What are some of the ways teachers and therapists can work with these parents so that it would be mutually satisfying and beneficial.

Parents Prefer and Need Teachers

A 1973 survey, A Preliminary Report on Parent Observations and Needs as They Relate to Programs for Deaf-Blind Children, conducted by the South Central Regional Center, revealed that most parents, when given the choice, preferred teachers instead of other professionals when in need. In thinking back on your own experience, you might understand why this is so. For many parents, teachers and therapists are the first ones to give concrete help to them regarding their severely handicapped child. Other professionals, while very sympathetic toward the problems, usually can not offer much help.

With the increasing knowledge and emphasis on parents' role in the development of a handicapped child, parents need educators to educate them about the child's developmental needs and ways of meeting them; teachers in turn begin to view parents as partners in the education of a severely handicapped child. For the first time, these parents were given the know-how to teach and to enjoy their handicapped children. What a thrilling and satisfying feeling that must be! Therefore, they respect your expertise and they are very much moved by the caring quality of your relationship with their handicapped children as expressed in the daily contacts you have with them. It is up to you whether you want to reach out to these parents, extending to them the same concern and care you have for their handicapped children.

How Can Teachers Help?

Individually, the parents have needs that vary from day to day. These needs fluctuate, often depending upon the family systems' capacity for resolving stress. Hopefully, there are other resource people in your school or community who can provide on-going counseling and supportive service to these parents. Being aware of family dynamics will assist you in your work with the handicapped child. Periodic conferences with the social worker or psychologist will help you in your understanding of the particular stresses the family is going through, and this information will shed new light on the behaviors in the child which seemed puzzling to you. With the individual educational plan conference now being mandated by Public Law 94-142, you will have many opportunities to confer with these parents directly and regularly; these conferences can be used to serve all parties well, including the parents, the teachers, and most of all, the child.

Even though many programs with young handicapped children have been reporting great success with the progress of the child

when parents were made a part of the education program, meaningful parent involvement is still a relatively new concept. Educators and parents will need practice before everyone feels at ease with parent involvement. A workshop like this one is a very helpful step toward meeting that goal. There are techniques which one can acquire to plan for a more successful parent conference, and we'll discuss that in a moment. For now, let us consider some of the barriers or obstacles that can stand in the way of a successful conference.

Because of different perceptions, roles, and social and cultural backgrounds, parents and professionals are bound to encounter disagreement and conflict. "Lack of understanding," "insensitive," and "impractical" are some of the criticisms expressed by these parents. "Lack of motivation," "unrealistic expectation," and "too demanding" are remarks often heard from professionals. Dr. Ray Barsch, in his book The Parents of the Handicapped Child, states that parents and professionals definitely hold opposing views. He remarked: "The professional wears one kind of lens ground in the laboratory of his collegian orientation and experimental background which he can call upon in making his observation. The parent of the handicapped child wears another kind of lens ground in the laboratory of prosaic daily living, hopes, ambitions, personal complexity, and sophistication. The lenses are not identical. They have been grounded for different purposes and refract illuminating information accordingly. These two different kinds of perceptual lenses cause each respective observer to view the child differently. In other words, the parent cannot be expected to perceive the child in the same manner as the professional does. These two inevitably different perceptions have often been the causes of distrust and a loss of respect. It is really a problem of perceptual incompatibility" (1968).

In pointing out the basic perceptual and role differences between parents and professionals, my aim is for us to be aware of the potential conflicts in existence in any teacher-parent relationship; recognition of this will help us in our relating to parents. When the purpose and the goal of the conference ultimately is to better serve the handicapped child, the perceptual difference between parents and professionals often can be reconciled.

What are the things that one can do to increase the likelihood of a more successful parent-teacher conference? First of all, be available. Teachers and therapists keep a very busy schedule; there are responsibilities in the classroom and outside of classrooms, lesson plans to be made, reports to write, and now parent conferences to be scheduled. There will be times when you just can not be available. But as much as you can, be flexible and schedule the conference so the parents can attend without too much hardship. This is especially important if you are in residential programs. They have jobs, other children, and obligations to prevent them from meeting with you at a designated

time. In being flexible on your part, your messages to the parents is: "I understand," "I value this conference so much that I am willing to make some sacrifices in order for us to meet." In doing so, you are demonstrating a model-setting technique. That is to say, in spite of your busy schedules, you make the effort to set up your priorities and one of them is the parent-teacher conference. Some of you might not be able to do this because of agency policy or other professional and personal obligations. But as much as you can, consider this as an option.

Secondly, be aware of your feelings and attitudes as well as the parents'. All of us carry with us certain values and judgments, and in relating to others we communicate these feelings and attitudes. Often the content of our conversations becomes overshadowed by these hidden messages, and barriers can result. Past experience is detrimental when it limits our thinking and our willingness to be open. There is certain comfort about acquiring knowledge and building up our experience professionally. However, in order for them to serve us well, we must remember that individuals are all unique, and must be aware of our tendency to judge future cases based upon past unpleasant experiences. Parents, on the other hand, react to us according to their past life experiences also, and they can be open or prejudiced toward us. So it is also important to assess their feelings and attitudes and to be aware of how they can influence the interactions we have with them.

Finally, because so much information needs to be exchanged during the IEP conference, it is important to prepare and structure your time. Write down the outline and any pertinent questions you wish to ask the parents. Glance over them during the conference, because you will need it to write a complete IEP. Although the most skillful interviewing gives the appearance of being a smooth and spontaneous interchange between the interviewer and the interviewee, the truth of the matter is this kind of skill is obtained only through careful study and years of practice. Putting yourself and the parents at ease at the beginning of the conference probably is the one single most difficult task at hand. Rapport must be established between you so a trusting relationship can develop. Be a keen observer and observe what is not there, the body language and the feelings behind the behavior. Do not be embarrassed by silences, because all of us need time to reflect and to process verbal exhanges. Ask leading questions instead of pointed questions and probe by saying "Tell me, describe for me..." Allow parents to ask you questions because that's what a conference is supposed to be--a two-way exchange. Mutual goal setting for the child is the main element for an IEP. You need to seek the parents' strength, and by valuing their input, you give them a sense of high self-esteem as well as a sense of true partnership with you in the education of their handicapped child. By training, teachers have not had much opportunity or experience in the field of interviewing. With the challenge of IEP at hand, some of these basic

skills in interviewing should be practiced by all teachers in special education. After all, interviewing is an art, a skilled techniques that can be improved and eventually perfected through practice by all. (A. Garrett, Interviewing: Its Principles and Methods, 1972)

In teaching, the professional needs to be aware of the total needs and impact of the child as a member of his or her family unit and as a member of the community. All available resources must be drawn upon in order to serve him or her and the family effectively. Personal examination of attidudes, feelings, values, and philosophy, in addition to knowledge gained, is viewed as essential for significant professional growth and development.

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COUNSELING WITH PARENTS OF HANDICAPPED CHILDREN

Betty Jane McWilliams

Harvard psychiatrist Lee Macht (1978) is reported to have been strolling beside a tree-rimmed lake among green fields adjacent to a large state mental hospital. "Why," he asked, "would any of those patients want to leave that lovely setting for a life in some fleabag boarding house?" His answer came from a colleague whose explanation was simple. He suggested, "Most patients insist they'd rather be on their own. I admit that's hard to understand. Too often we impose our standards and values on the people we try to serve." Dr. Macht now feels that "most people view their problems in terms of some specific human situation." For example, an unemployed person sees his or her problem as not having a job. The psychiatrist, on the other hand, sees the lack of a job as the end result of troubled interpersonal relationships, inability to accept responsibility, refusal to accept supervision, tardiness, or inability to live and work by the rules. The patient and the physician simply see the same problem from different perspectives. Time was when many people were not even candidates for certain types of counseling because of the inability of patient and counselor to meet together on mutual ground and to communicate successfully with each other. While this type of communicative breakdown still occurs, it is at least recognized in 1978. Dr. Macht states the problem simply. "The question is how to treat people in their own social and biological context." The present author, in different words, expressed the same sentiments (McWilliams, 1976):

> Anyone undertaking parent-counseling must recognize the individuality of parents, the variety of their personal strengths and weaknesses, the influence in their lives of their cultural and ethnic heritages, and the role of their total environment--home, occupation, social, and community--in shaping and maintaining their attitudes.

Eric Erikson (1950) literally revolutionized professional attitudes when he recognized in Childhood and Society that children are the products of the culture into which they are born and that patterns of child rearing can be understood only within the context of that culture.

However, in any counseling relationship, the person being counseled is only one side of the equation. The counselor is the other. Any statements made relative to the individuality of parents must be made also relative to counselors. The counselor is a human being, but hopefully he or she is

self-aware and capable of recognizing the limits imposed upon him or her by his or her own attitudes, prior experience, and training. It may be that no one individual can hope to be effective with all people who require counseling. I once had occasion to talk with a counselor who was unsuccessfully treating a seriously disturbed woman. It was quite clear that he did not like her as a person and that he himself was having difficulty with the relationship. Changing couselors was the final solution in this case. The woman began to work with a new counselor who could accept her, and she responded to his warmth and support. It is important to remember that none of us can be successful in 100 percent of our encounters with other people and that some relationships may not mature into mutually satisfying ones. We often forget, however, that it is quite possible not to like another person but to be able to love and support him or her in the finest of human terms. This kind of love is equated with caring and nurturing. If that concern is not possible, then we must be sufficiently mature and objective to recognize it and help the person find a better source of assistance.

One additional word about the counselor per se is indicated. Counselors derive satisfaction out of their ability to assist troubled people. They would be failures if that were not the case. However, that sense of satisfaction should come from pleasure in the work itself and from seeing good results. It should never come from feelings of superiority, authority, or control and certainly not from parental dependency which feeds the counselor's unhealthy need to be needed. It is necessary for counselors to be involved with the people they serve and to be warm and human in their attitudes toward them, but counselors will fail if they become emotionally involved on a personal rather than on a professional level. This differentiation requires maturity, wisdom, compassion, and a certain distance. The counselor must be able to help parents meet their needs without contriving situations designed to meet his or her own needs. There is a vast difference between the clinician who helps parents and children to grow into self-actualizing people (Maslow, 1968) and the would-be clinician who, by subtle means, prevents that kind of growth. For example, all clinicians are faced with parents who say, "I'm worried to death about Johnny. He doesn't like me. In fact, he told me he hates me." A clinician can be immediately reassuring and tell the parent that all children say things like that sometimes and that there is nothing to worry about. This couselor, fostering dependency and playing the role of the authority figure, might add, "Just relax and leave it to me. I'll talk to Johnny." The insightful clinician will take a different approach and will use this as a means of encouraging the mother to talk about her feelings and what precipitated them. "It must have hurt a lot when Johnny said that to you (reflection). Tell me what led up to his telling you he hated you." By that

one statement, the clinician turns the control back to the parent and encourages her to take charge of herself and of her feelings. In addition, the clinician is accepting direction from the parent by respecting her enough to discuss and try to understand what she is worried about rather than what the clinician thinks she should be concerned with. One mother who had had too much poor counseling once said, "I don't know what I ought to feel." In short, she was asking me to tell her how to respond. It was a trap I refused. Instead, I answered, "Sometimes things do seem confusing especially if we feel more than one way at a time." That led her to say, "Oh, yes! I get so mad at him. I think I could kill him. And then I feel guilty. He's so little and so lovable most of the time." I was able to say then, "No wonder you were confused. You, like many people, were feeling many different things. I sensed anger, guilt, compassion, and love all at the same time. Let's talk about some of those feelings." The successful counselor does not usurp power and feed his or her own ego by making parents feel that they need him or her to serve as their navigator through life. The counselor's goal is to help parents accept personal responsibility for their own decisions so that they may happily leave the counselor behind to begin anew with other parents, who will also, if all goes well, eventually move into new spheres which the counselor will not enter with them.

Carl Rogers (1961) has said it well:

If I can create a relationship characterized on my part:

by a genuineness and transparency, in which I am my real feelings;
by a warm acceptance of and prizing of the other person as a separate individual;
by a sensitive ability to see his world and himself as he sees them;

Then the other individual in the relationship:

will experience and understand aspects of himself which previously he has repressed;
will find himself becoming better integrated, more able to function effectively;
will become more similar to the person he would like to be;
will be more self-directing and self-confident;
will become more of a person, more unique and more self-expressive;
will be more understanding, more acceptant of others;
will be able to cope with the problems of life more adequately and more comfortably.

And this statement, as Rogers points out, applies equally to all human relationships.

The Nature of Counseling in Educational Settings

The processes and systems of counseling need not vary markedly from one setting to another except as the training and experience of the counselors vary. However, the content or the emphasis of counseling is likely to differ from situation to situation. The child usually comes into a school after his or her problem has been diagnosed and interpreted to his or her parents, who may or may not have accepted the life implications of whatever disorder is involved. They may or may not have accepted and understood the nature of the disability and what its natural history is likely to be. They may not be prepared at all for the role of special education in the handicapping condition, and they may be overwhelmed by the unique approach to education that will be required.

The teacher is in a ticklish position and often requires more information than the parents themselves may be able to provide. For example, it may be quite helpful for the school to have access to medical reports and to insights into what the parents understand about their child's disability. The school surely needs to know what, if any, treatment is projected and how the educational program can work with the medical specialists and fit in with the plans and thinking of other involved specialists. This helps the school to avoid the pitfall of giving erroneous medical interpretations, assists them in reinforcing desirable treatment goals, prevents their working at cross purposes with those responsible for care, allows them to amplify clinical information, and assures thay they will be kept abreast of management planning, indeed that they will have a role in planning. This is such an important part of working with parents and children that it is wise to develop a form which the parent can sign giving you permission to communicate with others who are treating the child so that they will know of your interest in cooperating with them and in exchanging reports. This line of communication can be invaluable to the school, but it may be of equal value to the other professionals.

I remember a rather depressed, meek little boy about whom I was worried. The family dynamics might better have been described as family dynamite, and the parents had an approach-withdrawal conflict about counseling for themselves. They made appointments and cancelled them, called hysterically asking for help, came to the clinic proclaiming that things were now fine, returned in a few days to say that their son was walking over desk tops at school and was being kept off the school bus because the driver could not control him. The school was trying to work with the parents, but the situation at school was rapidly deteriorating. A joint conference resulted in our establishing mutual goals for this family and in our working together to get the child into psychiatric treatment and the parents into coun-

seling--outside the school, I should add. While this handicapped child had problems that affected him educationally and influenced the course of treatment for the handicap, the underlying necessity was for help for problems that resulted from family deficits that would have existed had there been no handicap. Thus, counseling at school was not the solution to the problem.

The school's primary focus in counseling is, of course, to assist parents to understand, cooperate with, and accept whatever special educational programs their child may require. Thus, the school comes to the counseling scene at a special time in a child's life and remains through many years of changing needs. The school works with and around the handicap and decides how influential the handicap is to their primary mission, which is helping the child achieve the best educational level possible. The school counselor clearly walks a thin line between the school's province and that of medical personnel and between the school's attitudes and those of the parents, whose rights must always be respected.

It is very important for school counselors to realize that parents go through many stages--just as their child does--in learning to accept and handle a special problem. The defect that is obvious at birth forces a different set of circumstances and counseling needs from the defect that occurs later in life. Parents of newborns have concerns that are different from the concerns of parents whose children are entering first grade. First grade presents problems that are quite a bit different from those that occur at adolescence, and these are different from the ones that appear later on. Thus, the age of the child influences the kinds of dilemmas which the parents face. In short, irreversible blindness does not change, but the influence of blindness on all aspects of living does change over time. The same statement can be made relative to any known handicap.

The school is also faced with the need to recognize that, by the time their children are of school age, some parents will have come to terms with the handicap while others will have been unable to do that. These parents all have handicapped children, perhaps of similar age, but their requirements from the school will be significantly different. In addition, some parents will be well acquainted with the nature of and the reason for school adjustments and for special educational approaches. Others will be in a foreign land and will have great need for explanation and interpretation. Counseling would not be nearly so difficult if it could be assumed that parents of six-year-old, deaf-blind children all have the same needs and that all are capable of responding to essentially the same counseling programs. Since this is not the case, provision for individual differences is required, and there are few, if any, shortcuts. The sections which follow will present, in abbreviated form, a variety of approaches to counseling applicable to the public school teacher-counselor.

Getting to Know Parents

In one way or another, the teacher must know the parents who need his or her counsel. The best way to get acquainted is a face-to-face meeting during which the teacher-counselor does a great deal of listening, directing the conversation only enough to be certain that important areas are not avoided or inadvertently omitted. "Tell me about your daughter," sets the stage and allows the parent to tell those things highest on his or her agenda or that have made the greatest impact. Such a "lead-in" statement also permits the counselor to learn what the parent understands about the child's condition and permits him or her to determine areas appropriate for school counseling as well as those which the parent should be encouraged to discuss with the physician or treatment team. For example, a mother who expresses the belief that her deaf child will be taught "to pay attention" and "listen" better will obviously need assistance with understanding what a school program can accomplish, recognizing, at the same time, that her ideas are relevant and worthy of respect. Parents do, after all, usually know their own children fairly well and are a valuable source of aid for teachers. Too few teachers believe that parents are worth listening to!

It is important to remember, as previously noted, that parents of handicapped children must first come to terms with the handicap with which they may have had no prior experience and which they may be refusing to admit to themselves really exists, a basic denial of reality. They then must understand and accept all the "special" treatment and educational programs which their child requires. Their own previous experience has probably not prepared them for special education, and they may find in the facilities, the teachers, the other handicapped students additional personal-emotional hurdles which they neither recognize nor accept. These unrecognized attitudes may seriously impede the educational process and can provide topics for discussion in parent groups.

It is safe to conclude that all parents of handicapped children probably require counseling relative both to the handicaps and to education. There is no substitute for allowing parents to talk with a sympathetic teacher who knows how to listen and can do so nonjudgmentally. Only after learning something of the parents' needs and special strengths can an adequate program be planned.

Systems of Counseling

There are many different approaches to counseling, and we shall discuss a few that have applicability in the school setting, where it is unlikely that a teacher can devote several hours each week to individual counseling with each parent who requires it. Fortunate is the school system that can employ trained social workers to assist with this aspect of education. Even then, however, teachers themselves have certain basic responsibilities and will be required to do some counseling.

Acquainting Parents with the Educational Endeavor

Teachers of handicapped children are in special need of informed parents who are attuned to the educational goals and sympathetic to the methods for achieving them. There are many approaches to this problem, but at least a part of the counseling will involve providing information. While "informing" is often not thought of as counseling per se, it really qualifies for consideration as a part of counseling because only knowledgeable parents can begin to handle their own feelings. Ignorance breeds fear, misunderstanding, and needless anxiety. It also contributes to much mishandling of children by their parents. For example, it is probably far better to teach a parent to toilet-train a child while other kinds of counseling are going on than it is to wait for the counseling to change the parent's behavior. It may be too late by that time to prevent damage to the child. Information-giving is never a substitute for other forms of counseling, but it is a necessary part of helping parents cope with their handicapped children and may even lead to improved parental tactics. We shall discuss several approaches to this important aspect of counseling in the sections that follow.

Bibliotherapy

Many parents, not all however, do well with something that they can take home and read and mull over. Such materials seem to work best when they are written about a specific program and are designed to help parents understand why certain procedures and facilities are being used and how special educational adjustments are likely to assist their child. Such written materials can be given to new parents, and then the parents can be invited to meet with the teacher for discussion over coffee, perhaps, about what they have read. The group approach here is especially good. This personal follow-up is necessary in order to be sure that parents have understood what they have read and have an opportunity to ask questions and discuss issues with which they may not agree or which may have caused confusion. The presence of other parents whose children are already a part of the school can be effective in creating an easy atmosphere conducive to comfortable communication. Anyone who reaches his or her own conclusions and finds his or her own solutions will be able to function more creatively and cooperatively than will the individual who has been told what he or she should think and feel and how he or she should behave. That almost never works--unless it is used as a mechanism in certain instances for opening new doors and then making sure that the person being counseled has the opportunity to use the experience for developing his or her own insights. As noted earlier, this type of approach can be useful.

Audio-Visual Materials

Another approach to information giving is the use of audio-visual materials. Movies or videotapes or slide-tape presenta-

tions demonstrating life in the classroom can be most effective. Following this kind of presentation with group discussion again allows for the working out of problems that only viewing the materials would not permit.

School Visits

It is clear that we all profit from experience. Thus, it can be helpful for parents to visit the classroom for a long enough period of time and often enough to learn about the procedures, attitudes, and values to which their children are being exposed. Ideally, in the beginning of such experiences, having the facilities so that they can observe through a one-way-vision mirror is useful--particularly if a teacher, an aide, or another parent can be present to explain what is happening and to answer questions. Eventually, the parent may move into the classroom and become a part of that situation, perhaps even to the extent of participating with the children and teachers. Parents who have had this kind of experience combined with opportunities for discussion and exchange of ideas often make excellent aides and can sometimes be effective in helping to orient other parents. In fact, because they are themselves parents of handicapped children and can share this unique and deeply personal experience, they can, with supervision, often be more useful than professionals. This is not to suggest that parents can carry the load alone or that all parents are personally equipped for such activity. They need guidance, support, training, and a certain objectivity about their own problems before they can be effective. The results are worth the added work and responsibility which are bound to accrue to the counselor (Irwin & McWilliams, 1973).

Group Educational Experiences

Another means of acquainting parents with the educational requirements of their children is to use the idea of the parent school (Brocher, 1971) and to adapt it to the special needs of the handicapped child in the school situation. For example, the parents meeting together might actually engage in an activity important to the education of their children. They might later repeat the activity as they experience what it would be like to have the handicap in question. Silly putty or ear plugs will not create deafness, but they can reduce auditory sensitivity so that the parent can partially feel what his or her child feels. A blindfold can temporarily establish blindness; a wheelchair can limit mobility; arm and hand restraints can impede hand usage.

Following the educational activities, the parents and teacher-counselor could discuss the experience with the parents being encouraged to express their personal feelings and insights and to ask questions, the answers to which could help to illuminate the needs of their own children.

Parents as Teachers

Handicapped children require informed parents either to assist with the learning process outside of school hours or to know when not to involve themselves. They also require reinforcement, as do all children, for the movement they make toward the achievement of a goal. It is exciting sometimes to teach parents how to handle these demanding situations by assigning mothers and fathers to each others' children, giving them a task to do, tape-recording the interaction, and then helping them to analyze that interaction in some simple form. For example, they might time their verbal output in comparison to that of the child; count negative and positive comments, and so forth. The teacher can develop a simple system appropriate to the goals sought. After the parents have worked with children other than their own, they can be given a similar task with their own children, and they themselves can make comparisons. Discussion can then follow relative to the value they themselves place on negative vs. positive comments or on the comparative amount of verbal output of parents and children under both conditions. Parents who have experiences such as these are often able to verbalize about changes they wish to strive for in their own behavior. They can then be given repeated opportunities to work with other peoples' children and finally with their own. This activity also serves to give the teacher first-hand information about behavior and attitudes which might contraindicate the use of a particular parent as an extra-arm of the school. Anxiety, impatience, many negative comments, overwork--any of these would suggest minimizing parental aid at least for a time.

It is to be remembered that these approaches are not mutually exclusive nor are they the only ones that might be used to advantage. In addition, while these techniques can be useful in interpreting the educational experience for parents and in helping them gain insights into it, essentially the same approaches might also be used in assisting parents to cope with other aspects of their children's lives as they impinge upon education.

Helping Parents Cope with Related Problems

Any handicapping condition in a child forces the parents to yield their dreams of the perfect baby (Tisza, 1962) and to accept and love the child who is special. The fact that all parents must accept a child who may not completely conform to the dream child may be knowledge that is unavailable to the parents of a handicapped child as they focus on differences from other children without recognition of likenesses. In reality, they must eventually become aware of and respond to both likenesses and differences. For this reason, parent counseling as it relates to special education must also focus on aspects of child development which influence the educational mission and which are encompassed by it. The counselor can never forget that the child spends most of his or her life outside the classroom and that the person who comes to

school is the product of events which transpire on the school bus, at home, in Sunday school, in the neighborhood, and in the extended family. To the extent that these influences are relevent to education, counseling sessions will include them. The school will, however, be wise not to handle such problems if they are more fundamental than the handicap.

Discussion Groups

As in the previous section, parent discussion groups are useful, particularly if they can be conducted by the parents themselves with the teacher-counselor serving as a resource person and general guide. With mainstreaming so much a part of today's educational systems, it becomes possible to have parents' groups which contain parents of children with handicaps and parents of children who have no major disorders. These parental discussion groups can achieve the goal of helping parents to see the elements of normality in their handicapped children and can assist all parents in recognizing that handicapped and nonhandicapped children share common needs. Such an approach could do much to bring improvement--much needed--to the social scheme with its built-in biases which face people with handicaps. It is ignorance about handicaps and the people who have them that determines the minority status to which so many able people are relegated. That must change.

These groups may sometimes be theme-centered. This approach is quite useful when the parents and the counselor recognize major areas which require attention. Sibling relationships are often imperiled when one child is significantly different. The normal children in the family may feel--indeed, may be--neglected and may resent the one who seems to require so much from so many. They may sense that things are made easy for the different one and harder for them. Thus, some facet of these intricate relationships could be a topic for exploration. Theme-centered counseling is handled by establishing a topic or theme around which the session (or sessions) revolves. In such an endeavor, it is important to establish rules by which the group is to be run so that the theme is kept in focus and the goals of the session can be achieved. This system is just a bit more structured than are groups where the theme switches at the discretion of the group.

On the other hand, excellent groups can be run in a much more open-ended way--perhaps beginning by discussing things that went well in the past week and leading the group to try to understand and interpret them. For example, one parent related the success story surrounding her child's long-time refusal to take off his coat in the house. Having previously cajoled, screamed, punished to no avail, she simply grabbed him, got him down on the floor, and physically removed the coat while he screamed. She then held him down until he stopped crying. The beauty of the tale was that he had never since failed to remove his coat. The parents really discussed this episode and felt certain that what the mother was now viewing as cooperation probably was not, and together they

sought alternative approaches to getting the coat off. Even the mother who had won by brute force was able to see more effective ways of removing the coat while permitting her child to save face and be his own person.

The Parent School

The parent school can once again be used, but this time in a different manner. The teacher-counselor may elect an activity that grows out of the parents' concern for some such thing as their children's inability to share toys with others. The counselor might, for example, ask the parents to execute drawings of family constellations explaining that they will have five minutes to accomplish the task and that everyone is expected to carry it out on an 8-1/2" x 11" sheet of paper. The counselor might then place the paper on the table--too few sheets for the number of parents--along with a single box of crayons. This situation is almost bound to elicit competiveness and some refusal to share. The counselor can stop the activity in the required time and then lead a discussion about the feelings the parents had during the activity, about the variety of mechanisms used to cope, about the adult response as opposed to the less mature behavior of the child. Following such an experience, some parents may be a bit more understanding about "selfishness" and able to talk about systems of management that might minimize the problem and eventually teach the child to share.

Creative Dramatics

Another technique that can be enjoyable to parents as well as helpful in changing attitudes is some form of creative dramatics. This is frequently used with children but can be readily adapted for a variety of adult needs as well. The counselor tells a story, in this instance one created to demonstrate a particular type of problem or to express an attitude. The element of conflict between characters (mother and father, parent(s) and child, teacher and child, teacher and parents) can be left unresolved. The parents then volunteer to become members of various "casts" representing the characters in the story. They are given time to work out a resolution to the problem, and each cast spontaneously re-enacts the story in play form. The various solutions to the problem can then be discussed, together with the factors that brought them about, the attitudes reflected, and the pros and cons of the several solutions.

Parent Organizations

The teacher-counselor might also think about the possibilities offered by parent groups that declare their independence and organize themselves into associations designed to provide education, support, political action, and social outlets. Such organizations are not attractive to all parents, but they are excellent for some.

In addition, they can become advocates for school programs and can be very effective in helping to get public support for improved facilities for the handicapped. These organizations are a bit stronger and have better coordination if these are interested professional people who will lend a hand when asked and who will, in turn, ask for assistance from the parents when they can provide it. This kind of relationship helps professionals and parents to become equal partners in a relevant endeavor to the advantage of both.

The germs of counseling ideas presented here are not intended to be recipes for successful interaction with parents on all levels of parental need. They are suggested, rather, as a means of aiding the teacher-counselor in carrying out programs of counseling essential to the educational mission and in keeping with both the teacher's training and his or her sphere of influence. Parental and family problems of a more basic nature will undoubtedly require help from other more specialized sources. Thus, the teacher-counselor should be aware of community resources and make a conscious effort to cooperate closely with them relative to families being worked with in common and to use those facilities as sources of referral when the situation demands.

It is not the task of the teacher-counselor to attempt to create all parents in the same mold. Instead, the goal is to assist parents of many different persuasions and attitudes to manage satisfactorily with their handicapped children and with the school in order that the children may realize themselves as human beings with potential and hope and with the capacity to live fully and creatively. The goal for the parents is that they may derive satisfaction from their parenting in the full knowledge that they have come to terms with the handicap, have found the peace that comes with understanding, and can with joy grant their children independence and freedom "to be." The successful counselor derives his or her greatest satisfaction when he or she can step aside knowing that a child has become his or her own person, that he or she and his or her parents no longer need the counselor. For the mature counselor, that is professional happiness.

Evaluation

In order to be certain that any satisfaction derived is warranted and in order to avoid a false sense of failure, counseling programs should be assessed. Such assessments can assist the counselor in designing new programs, in altering old ones, and in improving techniques. They can help parents find their new strenghs and define areas that require more work. However, evaluating such programs is always difficult; and the methods discussed here are not fool-proof--any more than grading systems in schools are perfect.

Using Consultants

There is much emphasis today upon seeking consultation and guidance from psychiatrists. Children and parents are carefully discussed, recommendations for management made, programs initiated, behavior carefully recorded from a base line (level of performance at the start of therapy or training), and progress toward a goal measured. For example, a child might cry for an hour every morning when he or she comes to school, and his or her mother might hover outside the classroom door for an hour and a half and then reluctantly leave. The goal is to extinguish his or her crying and her staying power. It is a simple thing to record the length of time the child cries each day and how long the mother stays outside the door. Reduction in these behaviors is indicative of progress, and both parent and child can be reinforced for these small steps (successive approximations) toward the goal. The program can be called completely successful when the behaviors have been eliminated. At the conclusion of such a program, there is no doubt in anyone's mind about its success or failure.

The psychiatrist is often an ongoing consultant who assists with assessment by evaluating and interpreting behavior in subjective terms and offering guidance to the teacher-counselor who does the actual counseling, reporting regularly to the psychiatrist for direction and program planning.

Measuring from a Base Line

The system described above can certainly be applied to activities that do not involve psychiatric consultation and can be extended to the home where the mother and child together can keep the chart on a specific behavior, both acquiring greater insights in the process--provided, of course, that there are opportunities for discussion and nurture of emerging attitudes.

An example of having parents and children chart behavior is that of the father who recognized that he was precipitating temper tantrums in his son when he insisted that the child pick up all his toys and put them away before he went to bed. The little boy was an immature five-year-old with limited endurance. He was often overly tired by his nine o'clock bedtime, and his attention to picking up toys was hard to maintain. The father decided that nine o'clock was a bit late for this child and that he might have a more relaxed bedtime if the toys were picked up at eight with father and son both participating. That seemed worth trying. The father made a colorful chart showing the days of the week for a month. He explained to his son that he wanted to remember to help with picking up the toys. When he did what was expected, the child was to place a gold star on the chart. When the father had seven gold stars, the child was to decide what kind of special treat they could enjoy together. This system eliminated the temper tantrums within a week, and the father and son had an enriched relationship. The father also reinforced the child's behavior by reading him a

story after he was in bed on the evenings when there were no tantrums. Again, on his own, he decided that this shared time was valuable to them both and continued with the stories after the original problem had been resolved. It is clear from this example that the elimination of undesirable behaviors and the adoption of new patterns of response that can be documented is an excellent way to assess the effects of counseling.

Pre- and Post-Tests

These are somewhat difficult because they may be threatening to parents and because they are difficult to construct and are usually of unknown validity, meaning that there is uncertainty as to whether they are testing what they purport to be testing. Nevertheless, they are an assessment possibility. The anxiety of the parents can be minimized by explaining to them that the program, not they, is being evaluated and then by providing opportunities for them to express the anxieties that people feel about taking tests.

This approach is especially useful in determining how effective an informational segment has been. The questions can be informational in nature. "What system of teaching communication to deaf children is in use at this school?" The questions must, of course, relate to the content which is presented to the parents.

Other types of scales may also be used. The semantic-differential approach is fairly simple and is often used. An example is the following:

I worry that my blind child will never have friends.

1___Strongly agree 2___Agree 3___Undecided

4___Disagree 5___Strongly disagree

A group of such items (based on known frequent parental concerns) can be prepared and given to parents before their counseling begins and again at the conclusion of predetermined experiences. Since the same questions are used on both examinations, change can be plotted in whatever direction it occurs. In order to simplify statistical management, it is helpful to keep the form of the statements consistent. If the above statement were followed by one such as, "I am confident that my child will progress normally in school," the "strongly" agree would have a different meaning from the first one.

Asking Parents for Written Comments

Parents may be asked to write an evaluation of the counseling experience addressing themselves to specific questions:

1. What, if any, new understanding do you have as the result of these sessions?
2. What was most helpful to you?
3. What was least helpful?
4. Would you want to repeat this experience?
5. Would you recommend sessions like these to other parents?
6. Do you want to continue the sessions at this time?
7. If so, what do you want to accomplish by attending?
8. Give an example of a situation involving your child which you handle differently now.

The Interview

If there is time and if sufficient staff is available, the pre- and post-interview technique can be employed. It should be noted that this approach requires, ideally, formal training in interviewing or, at the very least, access to consultation with a competent clinician.

The Controlled Study

The best of all approaches to evaluation is probably the experimental one. Children of comparable status are randomized and placed in two groups. All of the children attend school in the usual manner, but the parents of children in Group A have six months (for instance only) of counseling while the parents of Group B children have no such program. Both groups of parents are tested before and after the experiment, and their responses are compared between and within groups. In addition, the two groups of children are compared on the basis of predetermined criteria--progress in reading, ratings of ability to get along with other children, for example. Ideally, the evaluations of the children would be done by more than one teacher in order to establish reliability, and they would not know which children had parents in counseling. This would help to minimize the "halo effect" -- or the belief things are better because something is being done to make them better.

Counseling is a costly endeavor in terms of both money and time. It is clear that it can be justified only if it can be demonstrated to be effective.

Conclusion

Working with parents is an innate part of educating their children. There are many ways of accomplishing the counseling mission. The teacher-counselor will want to use and create techniques with which he or she is comfortable and which are appropriate to his or her own training. However, "technique" is not enough. The major dimension in counseling is the committed, caring counselor capable of listening to parents and of seeing their problems from their perspectives.

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DEVELOPING A PARENT INVOLVEMENT PROGRAM IN AN EDUCATION AGENCY:

A STRUCTURAL MODEL

Mark Fraser

In research one can seldom prove that this "causes" that. More frequently, we are able to eliminate all alternative explanations except the one we have proposed, or we establish that this is associated with, but not caused by, that. In the case of parent and family services, however, evidence is mounting to support some rather important concepts:

> When parents are actively involved in their child's educational program:
> The child learns more rapidly.
> The child retains what is learned longer.
> The child feels better about himself or herself.
> The parents feel better about themselves.[1]

While no research findings can predict the future with a 0 percent chance of error, one can be reasonably certain that the development of a family services program will positively impact upon the child. How, then, does one begin? Who needs inservice training? What is the role of the local education agency (LEA) in the delivery of family services?

This paper will present a four-stage model for family services.[2] Each stage represents a level of involvement and a type of problem to be solved. Naturally, different problems lead to differential problem-solving skills and resources. Thus, each stage focuses on a particular role to be fulfilled by the educator. However, parent leader training in each of the roles may be useful. This method allows the administrator to determine a level of parent involvement and gives direction to program development.

Background of Family Services

Until September, 1977, parents of severely multi-handicapped children received little social and educational support if they chose to maintain and train their child in their home. Few social services mechanisms existed for supportive family interventions. In large measure multi-handicapped children were placed in institutions or other group facilities. However, since 1972 a federal policy of deinstitutionalization and a body of knowledge called normalization (Wolfensberger, 1972) have effected massive changes in the educational and institutional systems serving disabled persons and their families. Public Law 94-142, as of September, 1977, clearly mandated that the most profoundly handicapped child be served in the least restrictive environment suitable to his or her needs. As a consequence, many children once denied access to com-

munity schools are now living at home, being educated in special classrooms, and being served by family services agencies. More recently still, all state departments of vocational rehabilitation have been required by the 1973 Rehabilitation Act to provide work evaluation, training, and placement for the multi-handicapped. New work training technologies (Gold, 1972) substantially improve the effectiveness of vocational trainers in working with the handicapped (Gold, 1974).

In response to these changes, social policy is moving to meet the needs of an expanding client population: families choosing to keep handicapped children at home. However:

> The state has emphasized programs that in essence substitute for the family, an emphasis that is expressed in both the scale of expenditures and type of services. Services that attempt to support the family have received a lower priority.[3]

These substitutive mechanisms reflect our society's basic values, our orientation to right and wrong. By extension, the human services system has adopted models consistent with that orientation. Our service structures are largely reflective of early American puritanism, a religious philosophy which abhorred deviancy--hanging the retarded and burning witches. Now, of course, these things no longer happen. More recently, deviancy has been dealt with by substitution and segregation rather than by extermination. The segregation of the handicapped was justified on the basis of centralized provision of specialized services and was consistent with the thinking that such "defective" persons represented the "degeneracies" of society (Kugel & Wolfensberger, 1969). Litigation calling into question the rationale of segregation was first applied to racial deviancy in Brown v. Topeka Board of Education in 1954. This judgment noted that a person's behavior tends to be affected by social expectation; that separate though equal facilities reinforced deviant role expectations. Along with this idea of role performance rose the principle of "normalization."

Normalization was first implemented in Sweden. It means the provision of an existence as close to normal as possible. In practice, the principle necessitates a new orientation to service provision. Services must be designed to support, not segregate, the disabled in the conditions of everyday life. Access to daily life requires many adaptations, e.g., telephone amplifiers for the deaf, buses which stoop for wheelchairs, and job training for community employment. It connotes a functional approach to therapy. For example, a chronic severely disturbed adult might well receive daily simulated job experience, task training, medications, group psychotherapy, and living skills training. Treatment goals focus upon functioning at the highest level possible in the community. Transitional living programs help clients move from restrictive settings to neighborhood settings. In short, the commitment of social policy

to the principle of normalization affects not only the structure of services but the way service providers think and are trained.

There are problems in this transition from substitutive/segregationalist services to supportive services. Community-based services have not proliferated, yet deinstitutionalization has been pursued with vigor. Many families of severely multi-handicapped children now have their child placed at home but receive no assistance in fulfilling the family responsibility of socialization. Schools have rapidly expanded their programs to serve these children, and research has sought to identify appropriate educational techniques in areas of communicative, cognitive, and motoric development.

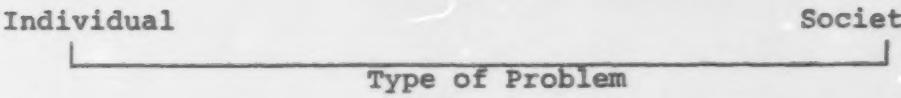
Because severely handicapped children have not resided in the community, there is no residual backlog of in-home child care knowledge. Extended family systems and family services agencies lack both theoretical and practical know-how. Parents question, "How do I teach her? What do I teach her? When do I teach this?" Parents needs have been articulated elsewhere. Suffice it to say that the problems of parents do not end. Counseling needs may change into training needs. While the historical stigma of raising a handicapped child is lessening, the child's presence in a grocery store is cause frequently for impolite, intrusive staring. In a sense the family is always on the hot seat. Raising a handicapped child is a chronic condition. The condition, however, is less with the child than with our society, which has failed to provide adequate health and welfare services for families choosing to raise handicapped children in the home.

The Role of the LEA vs. the Role of Human Service Organizations

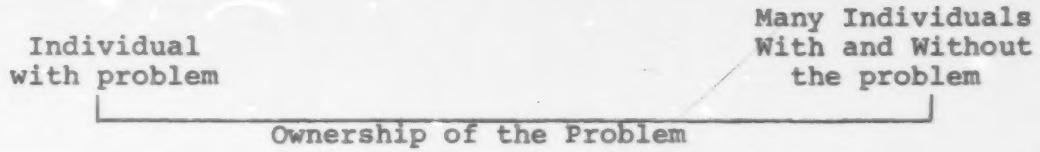
The schools have a responsibility to educate. In the fulfillment of that mandate, ancillary transportation, health, and social services may be provided. However, the principle of normalization suggests that all community agencies share in the delivery of services to the handicapped. This means that the state departments of vocational rehabilitation and social and health services (these vary from state to state) must assist the school. The model presented here is based on this concept. Thus, while the LEA may have a responsibility to conference about, enable, or broker social and health services, it cannot perform them. It is time for other professionals to catch up with educators and for other human service organizations to catch up with the LEAs.

Developing a Family Services Program: Overview

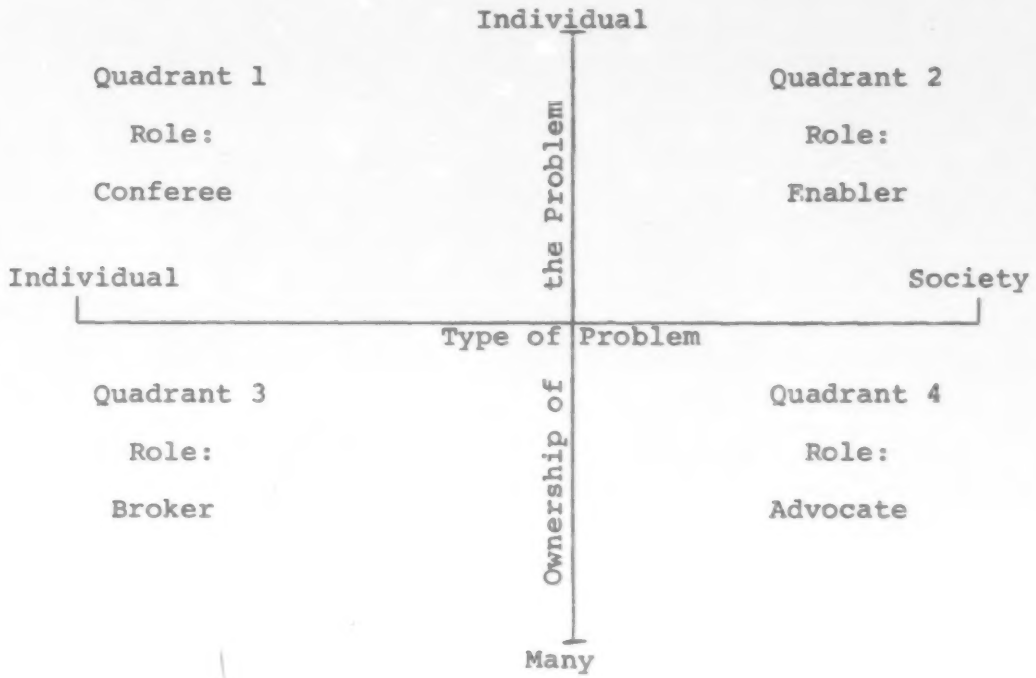
Parents and families of handicapped children experience many types of problems. These can range from a very focussed individual problem (e.g., should Debi have a dangerous operation?) to broad-based societal problems that affect children in an entire group. An example of this latter type of problem is the lack of adequate health insurance for all deaf-blind diabetic children. On a continuum then:



Similarly, the persons who have or "own" the problem can vary. On what one might call "the small end," an investigator might find individual parents. Typical needs in this area include specialized parent training, marital counseling, or location of a dentist who has experience with cerebral palsied children. At the broader end of the continuum, we might find groups of parents who "own" the problem, even though they do not have it themselves. In the case above, if the state Parent Teacher Association were to become concerned about the lack of dental care for the handicapped, parents without the problem themselves would be concerned, in essence "owning" the problem. Thus, the second continuum consists of:



If one combines the two continua, two axes and four quadrant areas are formed. Each quadrant may be summarized as a designated role. Thus, one has the following:



Discussion of Four Quadrants

With this model, the administrator can begin staff training in any quadrant. The training plan might start with a Quadrant 1 focus, as many educators fulfill the role of conferee when soliciting parent involvement in the writing of an Individual Education Plan. On the other hand, teachers may have asked for training in organizing parent groups, the major activity of Quadrant 2. Typical role activities break down as follows:

Quadrant or Level	Principle Role Taken	Educator's General Activity	Inservice Topics Skills the Educator May Master
1	Conferee	Participation in the problem-solving or planning process with a parent(s), e.g. conferences, staffings, reviews	Understanding the dynamics of families and the impact of a handicap upon the family organization, reflective listening, assertiveness, engaging, supporting, communicating
2	Enabler	Organization and leadership (high and low profile) of parent groups	Understanding of group process and dynamics, discussion leading, leadership skills
3	Broker	Identification of a problem and making a referral to a community service agency	Knowledge of community resources, crisis counseling skills, building resources when they aren't available
4	Advocate	Training parents or acting on behalf of parents to obtain benefits	Advocacy training, lobbying, grant writing, public relations, coalition building

Starting a Family Services Program

How do you begin? Clearly this is a big task. The incipient program should meet needs of teachers, parents, and administrators. It should not attempt to be comprehensive. In our experience it is best to start a parent and family services program with a small

planning group of teachers, supervisors, administrators, and, if possible, a regional consultant. This may sound paradoxical, perhaps even heretical to some, as a parent representative is not included. However, at these early meetings the goal is to cull out exploratory, organizational objectives. Frequently staff attitude is the first stumbling block. In one program development project, this attitude was observed to relate to a lack of assessment skills in dealing with families. Tentatively one might suggest that many people fear what they do not understand. Thus, in this case the planning group arranged an in-depth in-service on family and group dynamics. The resulting attitude changes (from caustic skepticism to cautious enthusiasm) indicate that the starting place is in-house, that there is homework to do before involving parents and families.

Doing Your Homework

If you are a teacher, "doing your homework" means developing administrative support for your ideas. In some ways your approach is that of a salesman: you have a product (parent involvement) that produces a desirable effect (child growth). Your product is new, and people do not know much about it. In fact, they may question your product's effect. Thus, you need to know what you are talking about. Become familiar with the research, avoid the hearsay. Be honest about the time and money involved; you might explore the cost of the desirable effects of your product. In short, the following planning stages are suggested:

1. Organize a small group of interested professionals. Review the research on family services.[4] Set up some small goals for parent involvement.

2. Ask an administrative representative to join your group. In most cases you will find administrators to be supportive of parent involvement. Be sure to quote the findings of the research you have reviewed.

3. As a group identify a quadrant or level of activity. Beginning in your own backyard, plan appropriate staff in-service. This may include workshops on family dynamics, group process, assertiveness, crisis counseling, community resources, and parent presentations.

4. Form a parent advisory group and ask for a parent representative to present recommendations for parent involvement. By this time the staff should feel more equipped to involve parents.

5. Jointly, plan activities and training for parents and professionals. For example, if a parent group is to be formed, Level 2 training for parents and professionals would be advised. Likewise, if

teachers are interested in effective ways to make referrals, Level 1 and 3 activities are indicated.

Realistic Expectations for Parent Involvement

There is no one activity that will appeal to all parents. Magic does not exist. For many parents of handicapped children, involvement in their child's educational program sounds vaguely like adding a twenty-fifth hour to the day. Some are working. Some are glad to have the child out of the home (Think of how "summer vacation mothers" look forward to the start of school in September). Some will ask for training. Some will demand changes. It is realistic to expect parents to fulfill their legal responsibilities of child care. This includes attendance at staffings and reviews--Level One. However, additional activities should be dependent upon parent interest and need. Years ago, Martha Eliot, Chief of the Children's Bureau, summarized this approach when she said:

> When officials of public agencies ask what kind of services should be provided for retarded children, my advice is to ask the parents...(they) are often best qualified to say what help they need, though professional persons will provide the hows.[5]

Two Principles of Parent and Family Services

Finally, there are two general principles which may guide the professional in working with families. The first of these is to maximize the supports in the family environment. For the child, the professional is a temporary figure. He or she comes and he or she always goes. Parents are different. While not permanent, their relationships with their children tend to be substantially more enduring. For their children, parents fulfill the roles of conferee, enabler, broker, and advocate. The family is the natural setting, and it continues to be best suited for the socialization of children.[6]

The second principle is to follow the assumption of least contest. Generally, the least amount of pressure needed to accomplish a goal is the optimum level of contest. Excessive force begets an excessive reaction. In most cases change can occur through existing channels, be they conference, review, hearing, appeal, or court litigation. Escalative pressure, however, should occur if lesser channels prove unable to resolve problems. Thus, neither self-effacing smiles nor frontal assaults are advocated. Rather, the use of the strategy which will accomplish a goal with the least potential for backlash is recommended for your scrutiny.

Footnotes

[1]This particular study is a doctoral dissertation. A good starting place for those interested in pursuing this is: Home-based programs: A growing alternative, Child Care Quarterly, 1977, 61-71. Following are a number of other research articles which support the suggested hypothesis:

England, G. et. al. The utilization of parents in a speech correction program, Exceptional Children, 1972, 38, 407-12.

Gillum, N., et. al. The effects of parental involvement on student achievement in three Michigan performance contracting programs (CS 003647). Washington, D.C.: DHEW, Educational Resource Information Center.

Goodson, B.D., & Hess, R.D. The effects of parent training programs on child performance and parent behavior. Educational Resource Information Center, P. O. Box 190, Arlington, Virginia 22210.

[2]The model was adapted by the author and Dr. Pamela Landon of the Graduate School of Social Work, Denver, Colorado. The basic model was developed for use in human services by Ruth Middleman and Gale Goldberg in A structural approach to social service delivery, Columbia University Press, 1974.

[3]Moroney, R.M. The family as a social service: Implications for policy and practice. Child Welfare, 1978, 57 (4), 218.

[4]This research is mounting rapidly. For recent articles a review of Exceptional Children and doctoral dissertations may prove fruitful. There are numerous other periodicals which publish short research articles on topics pertaining to child development. These include Cognitive Development, Journal of Applied Behavorial Analysis, Children, American Journal of Mental Deficiency, and Child Welfare.

[5]Eliot, M.M.: Unpublished. Address to the National Association for Retarded Children, Boston, Massachusetts, 1954.

[6]In the United States, the family has been increasingly divested of its histroical responsibilities to socialize and educate.

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RIGHTS OF PARENTS

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Public Law 94-142, Section 3, states that one of the purposes of the law is to assure that the rights of handicapped children and their parents or guardians are protected. In compliance with this law, and under the authority of Policies and Administrative Procedures for the Education of Handicapped Students, Policy 3573.7, Texas Education Agency, Division of Special Education Developmental Services, is at this time, in the process of developing a booklet on the rights of parents. This publication will be distributed through the school districts to parents or guardians. The information presented at this time is based on the material presently being organized for the parent's rights book.

Rights of Parents

Notice

A parent of a handicapped child has a right to:

- receive notice about the child's special education program in writing and in the family's primary language
- have notices about the child's special education program explained to them
- be informed as to when and why the school district begins or changes the identification, assessment, or educational placement of their child
- be informed if, and why, the school refuses to begin or change the identification, assessment, or educational placement of the child
- be informed about each assessment procedure or test, report, record, and any other factor the school district uses to make decisions about their child
- be informed as to why the child's special education placement was chosen over other placements.

Assessment

A parent of a handicapped child has a right:

- to request the school district to provide for an independent assessment of their child if the parent disagrees

with all or part of the comprehensive individual assessment obtained by the school district. The school district may either:

.. request a hearing to show that its assessment is appropriate, or

.. provide for the independent assessment at no cost to parent

. to obtain an assessment of their child's educational needs and abilities from qualified professionals of their choice at their own cost and to:

.. have the information from that assessment included in any decision made about the child's program

.. be informed by school personnel where an independent assessment can be obtained.

If it is found at the hearing that the district's assessment was appropriate then the district does not have to provide for the independent assessment. If it is found that the district's assessment was incomplete, the district may have to provide for additional, independent assessment at no cost to the parent.

Individual Education Plan

A parent of a handicapped child has the right to:

. participate in the admission, review, and dismissal (ARD) committee meeting when their child's individual educational plan (IEP) is planned and written

. take someone with them to the ARD committee meeting to assist or represent them in the decision-making work of the committee.

If the parent cannot or chooses not to go to the ARD committee meeting, they may ask for a telephone conference or another means of communication that they and the school personnel agree upon.

The parent has a right to see, upon request, a copy of their child's IEP or to receive a copy at cost.

Educational Records

The parent of a handicapped child has a right to:

. know what records involving educational decision-making

about their child are being collected, maintained, or used by the school district and where those records are located

- inspect and review all records maintained on their child
- make copies of their child's records at a reasonable cost
- have someone at their child's school explain or interpret any item in their child's records
- give consent before their child's records can be seen by someone not involved in the child's education
- know who, other than the people involved in the child's education, has seen their child's records and why
- ask for a change in their child's records if they think a statement is wrong or misleading
  - .. ask for a hearing if the school refuses to change the statement
  - .. add their own statement to the child's records if the hearing decision is that the statement in their child's records with which they disagree is accurate
- be informed when their child's records are no longer needed by the school district and notify the school district if they wish to have those records destroyed

Educational Placement

Each handicapped child has a right to:

- be placed in the educational setting which will allow for the development of his/her abilities in accordance with the needs stated in the individual educational plan
- remain in the regular education classroom unless the nature or severity of the handicap is such that he or she cannot receive a satisfactory education in the regular classroom using additional materials, equipment, and services
- be considered for a variety of educational placements, including placements in the home school, approved nonpublic schools, home instruction, special schools or institutions, or residential placements
- be educated as much as possible with children who are not handicapped

- be educated as close to home as possible
- have the educational placement reviewed when the individual educational plan is changed (Educational progress will be reviewed informally every three months. Placement will be reviewed at least annually by the admission, review, and dismissal committee when the individual educational plan is updated.)
- participate in extracurricular activities (such as school clubs, athletic activities, and musical groups), meals, and recess on the same basis as nonhandicapped children.

Consent

Consent or permission may be needed for important educational decisions affecting a handicapped child.

Consent of the parent must be voluntary (given freely) and can be withdrawn at any time.

Consent must be made only after the parent has been informed and when the parent understands the information and actions for which they are giving consent. Therefore, a parent needs to ask questions if they do not understand a consent form.

A parent must give written consent before:

- a child receives a comprehensive individual assessment
- a child is placed in a special education program
- a child is changed from one special education placement to placement in another special education or general education program
- education records are given to a person not directly involved in the child's education.

If a parent refuses to give consent, the school district may request a hearing to see if the child should be assessed or placed without parental consent. The parent has a right to go to the hearing and tell why they refuse to give consent.

Steps To Hearings And Appeals

1. If a parent chooses to request a hearing, it must be filed within fifteen (15) days after the school makes a decision, fails to act, or takes an action with which the parent does not agree.
2. The request for a hearing must be made in writing and must

explain why the request for a hearing is being made.

3. One copy of the request for a hearing should be addressed to the school district's Board of Trustees and mailed or taken to the superintendent's office before the fifteen (15) days are up.

4. Another copy of the request for a hearing must be sent to the Commissioner of Education before the fifteen (15) days are up. The Commissioner's address is 201 East Eleventh Street, Austin, Texas 78701.

5. Within ten (10) days after the request for a hearing is received by the Commissioner of Education, a hearing officer appointed by the Commissioner will hold the hearing nearby. During the hearing the parent will present their side of the problem to the hearing officer and the school district will present their side. It is recommended that the the parent be represented by a lawyer since the Rules of Evidence will apply.

6. Within fifteen (15) days after the hearing, the hearing officer must give the school board a recommended decision and within twenty (20) days after the hearing the school board must make a final decision about the problem and tell the parent their decision.

7. If the parent does not agree with the school board's decision, the parent may appeal the decision to the Commissioner of Education. This appeal must be stated in writing and sent to the Commissioner of Education within five (5) days after the school board has made its decision.

8. Within fifteen (15) days after the Commissioner of Education has received the parents written appeal of the school board's decision, the Commissioner must make a decision about the problem and give the decision to the parent and to the school board.

9. If the parent or the school do not agree with the Commissioner of Education's decision, the decision may be appealed to the State Board of Education. This must be done in writing within five (5) days after the Commissioner's decision is received. The State Board of Education's address is 201 East Eleventh Street, Austin, Texas 78701.

10. The State Board of Education must meet, make a decision, and give it to the parent and the school district within thirty (30) days after they receive the appeal from the parent or the school district.

Please Remember to:

Keep good records.

It is important for both parents and school personnel to keep accurate, complete, written records about the child which are useful in making decisions about the child's handicap, educational program, and progress in the program.

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SOCIAL/EMOTIONAL

THE DEVELOPMENT OF AFFECTIVE RELATIONSHIPS AND SOCIAL SKILLS IN DEAF-BLIND STUDENTS

Susan C. Hupp

The retardation of affective development in severely handicapped, deaf-blind students substantially limits their opportunities for social development. This may be the direct result of not possessing a skill, such as not engaging in cooperative play due to the inability to approach a peer, or it may be the indirect result of not possessing a skill, such as not being included in recreational activities due to a lack of cooperative play skills. A review of affective relations that are necessary for promoting social development at increasingly more sophisticated levels hopefully will provide a solution for remediating the limited social opportunities available to these individuals.

Development of Affect

Affective relationships, which may be defined as the type of involvement a person has with other persons during both their presence and absence, develop markedly during infant and preschool years. They include relationships with familiar and strange infants, children, and adults. Affective relations are evident when individuals approach each other, coexist, depart from each other, and partake in isolate activities. In other words, they involve every activity undertaken by the individual.

The development of affect has been considered from a multitude of perspectives. Several of these seem particularly important to review before one attempts to remediate social deficits in students. The development of attachment behaviors, or the ability to depend on one person more than on others to satisfy needs, has been addressed by Flavell (1977). Within the first nine months of life, most infants will progress through the following sequence of steps: inability to differentiate between humans and nonhumans, ability to recognize familiar persons, formation of attachments to select familiar people. Some infants will even demonstrate anxiety in the presence of strangers during the final stage.

Development of the social self can be seen through the type of play in which a child partakes. Parten (1932) has described and sequenced eight levels of play that represent the progression through which a nonhandicapped child will pass. These are listed and defined in Table 1.

Insert Table 1 about here

Utilization of Developmental Literature

The application of developmental literature to the programming of social skills for handicapped individuals requires that the teacher translate and adapt developmentally sequenced abilities into functional

tasks. Williams, Hamre-Nietupski, Pumpian, McDaniel-Marx, and Wheeler (1978) have delineated four types of information that are essential considerations for the educational programmer and that typically are not provided by developmental literature. These include:

> (A) the frequency that individuals engage in the various levels of social activities; (B) the appropriate time and place to engage in a social activity; (C) the chronological age (CA) appropriate for various tasks (e.g., games, work tasks, community survival tasks) related to social activities; and (D) how one might adjust the normal developmental sequence to suit the handicapped learner. (p. 287)

The determination of each type of information is essential for making educational decisions. This decision-making process entails answering several specific questions.

Selection of Curriculum Areas. In what types of tasks should severely handicapped, deaf-blind students demonstrate competence? Possible considerations include activities that occur at work, home, or in the community. These activities can be divided further into tasks requiring attending to others as opposed to attending to self; tasks that are formal as opposed to informal; tasks that are directed as opposed to tasks that are self-initiated, sustained, and terminated; and tasks that consist of active as opposed to passive activities. In addition, a hierarchy of tasks that are appropriate for various age levels should be established within these categories.

Selection of Task Components. Which components of a task should be taught: Each task can be divided into components that represent a continuum of task initiation to task completion. Williams, Pumpian, McDaniel, Nietupski, and Wheeler (1975) have specified four components that may be considered when programming for interaction. These include appropriate initiating, receiving, sustaining, and terminating behaviors.

Planning for Dimensions of Interaction. During social interaction, individuals exhibit mannerisms that, when appropriate, may tend to increase the likelihood of another person's willingness to interact. What dimensions of interaction should be taught in conjunction with a social task? Carney, Clobuciar, Corley, Wilcox, Bigler, Fleisher, Pany, and Turner (1977) have suggested two categories, physical and verbal projection. Physical projection includes an individual's physical appearance, movement of body parts and of self in space, proximity to people and objects, and interaction with objects. Verbal projection includes an individual's conversational skills. These are both seen as crucial abilities to be considered during the training of social acceptability.

Selection of a Curriculum (or a Curricular Planning Guide)

It may now be apparent that selection of a sequence of social

skills to be taught to a handicapped population is not an easy task for the teacher. While there are many guidelines and curricula available from which to select a training sequence, few authors address the issues that have been presented above. The following is a summary of selected guidelines and curricula that have been specifically created for use with handicapped students.

Leisure Time Activities Curriculum. Wehman (1976) developed a curriculum planning matrix for social activities that may be taught to developmentally delayed students. The matrix is composed of five tiers of social skill categories that are increasingly more advanced. These include, in sequential order: action on play materials, passive leisure, game activity, hobby activity, and active socialization. Within each tier, there is a list of activities that progresses from simple to complex behaviors. For example, within Tier I, Action of Play Materials, the span of activities starts with "acts on toy or limited play materials" and ends with "engages in symbolic play"; within Tier II, Passive Leisure, the span starts with "turns on radio or television" and ends with "attends a variety of sports/entertainment." (p. 310) The matrix can serve as a guide to assist a teacher to develop appropriate programs simultaneously on several tiers.

Minimum Objective System for Pupils with Severe Handicaps, Volume 4. Williams and Fox (1977) compiled a curriculum sequence for the development of social-skill behaviors typically exhibited by nonhandicapped five- and six-year old children. The sequence ranges from the zero level of performance to competent performance. Tasks representing the behaviors are to be chosen by the teacher so as to allow the student to function in an age appropriate manner. In other words, the context in which a six year-old child might exhibit a behavior would probably not be the appropriate context for a 15 year-old young adult. Therefore, an appropriate context must be determined for teaching the specific behavior that the 15 year-old student has not yet acquired.

The curriculum is divided into the following major programming areas: decrease behaviors that interfere with instruction and learning, inititates, receives, sustains interactions, terminates. Within each area there is a sequence of objectives that represent the complete continuum of development. For each objective, a potential training sequence is delineated. For example, the major programming area "Initiates" includes instruction of behaviors ranging from "looks at objects or persons" to "offers assistance." (pp. 30, 36) The curriculum format assists a teacher in developing concurrent programs within all components of interaction, enabling the student to learn a complete cycle of interaction.

Social Interaction in Severely Handicapped Students: Training Basic Social Skills and Social Acceptability. Carney et al. (1977) developed a curriculum sequence designed to teach rudimentary social skills and socially acceptable behaviors. The basic social skill sequence progresses from zero level performance through mastery of

the following categories of behavior: reacts to others, reacts to objects, seeks attention, interacts with objects, demonstrates concept of self, interacts with others. Within each category, a variety of goals and a sequence of objectives that will lead to acquisition of the goals is delineated. For example, one of the goals within the category of "Interacts with Objects" addresses a student's need to initiate play. A sequence of successively more advanced objectives has been included that ranges from interacting with a familiar object that has been placed within reach to obtaining an object with which to play during an unstructured period of time.

The social acceptability training section provides sequences of objectives within the two major curriculum dimensions of physical and verbal projection. Each objective addresses appropriate behavior to be exhibited by the student in a multitude of settings.

The curriculum suggestions offered by Carney et al. (1977) provide a teacher with programming assistance in basic skills upon which more sophisticated behavior can be established. The student may benefit by learning prerequisites to a wide range of unique social opportunities.

Family-Life Curriculum. Hamre and Williams (1974) proposed a curriculum model for the development of family life skills, which includes the skill area of bodily distinctions, self-care, family relations and roles, social interactions, and social manners. The various skills were selected on the basis of their presumed value in facilitating independent functioning of students in community settings; the curriculum was designed to address needs of students who are 12 to 16 years of age. While not all of the curriculum areas have been developed fully, objectives within selected skill areas have been sequenced and task analyzed. The format includes a teaching procedure that specifies baseline procedures and suggested teaching steps. For example, the area of "Bodily Distinctions" has been divided into four components: body parts, sex distinctions with clothing, sex distinctions without clothing, and body changes related to growth. The body parts component has been analyzed into a series of four phases progressing from the discrimination of body parts on others to the labeling of body parts on self. Instructional procedures for each phase are listed separately.

The value of curriculum planning as proposed by Hamre and Williams (1974) is the emphasis placed on the specific abilities that must be acquired by adults who are going to live as independently as opportunities will allow. A teacher should be able to design teaching programs that will lead to a direct and functional outcome for the student.

Curriculum Evaluation

The selection of a curriculum to implement is a process that requires systematic analysis. While most curricula share some common components (e.g., statements of behavior to be learned, longitudinal sequences of behavior), only some include other important components (e.g., criterion statements for objectives, data collection procedures, procedures for assuring maintenance and generalization). A standard format to be used when evaluating curricula and recording reactions may help a group of teachers to share the work of determining which curricula should be selected for implementation. The following categories represent a suggested framework.

Identifying Information. This section should include information allowing the potential user to identify the curriculum and to obtain it from the publisher. Include title, publisher, and cost (if known).

Scope. Describe which skill areas the curriculum covers. Be specific enough so that the user can evaluate if the curriculum is appropriate for a desired application. For example, "play" is not adequately descriptive. Explain if the curriculum includes training sequences for areas such as cooperative play and isolate play.

Format. Describe the layout of the curriculum. This section should not include specific skill terms. It should be designed to tell the user how to "access" the information. For example, each area in the program may include prerequisite skills, goals, task analyses of objectives for each goal, and criterion for each objective.

Strengths. Curricula are composed of various components; however, the nature of the specific components varies from curriculum to curriculum. List the particular strengths of the curriculum you are evaluting. See Table 2 for a list of potential list of components.

Insert Table 2 about here

Prerequisite Knowledge Required of User. No curriculum is perfect. Incompleteness need not be viewed as a weakness unless the user does not have sufficient background to fill in the missing information. This se-tion should delineate those skills a user should have in order to use the program appropriately (See Table 2). For example, goals in the program may be task anlayzed without criterion statements. The user must be able to specify appropriate criterion. Or the goals may not be task analyzed into objective statements. Again, this requires specific knowledge by the user of task analysis.

Weaknesses. Some curricula actually include misleading or eroneous information. For example, the prerequisites described

may not be essential prerequisites. The potential user should know this in order to decide if the weaknesses are so detrimental as to make use of the curriculum counter-productive. List these weaknesses.

Curriculum Development

Practically all teachers have encountered the dilemma of not being able to locate a curriuculum in a programming area of concern. Existing curricula may not address specific topics or they may not include instruction in components or dimensions that a teacher would like to teach. The teacher must then decide to forgo teaching an important skill or to develop his or her own curriculum sequence. Perhaps unknowingly, many teachers are developing portions of curricula every day. With a little more time and effort, a total array of objectives for a curriculum area may be determined and, subsequently, provide the teacher with a complete blue-print for teaching a student to master the skill. A benefit of the additional effort is assurance on the part of the teacher that the skill is being taught in its entirety. A suggested progression of the curriculum development procedures follows. The reader is referred to Table 3 for an illustration of the process.

Insert Table 3 about here

Programming Areas of Concern. Determine the exact nature of the skill to be taught. The teacher will need to judge the scope of the problem.

Relevant Components. Most skills entail judgment concerning the appropriate time and place to practice them, as well as the selection of appropriate initiating, receiving, sustaining, and terminating behaviors. Determine all components that are necessary for the programming area that has been selected.

General Goals. General behaviors should be delineated to specify how the components of a skill (e.g., initiating, receiving) must be applied within the curriculum area.

Long-Term Behavioral Objectives. For each goal, state all of the objectives a student should learn in order to perform the selected skill in its entirety. For example, a student may need to accomplish the goal of saying yes or no in a variety of situations. List all of the situations as separate long-term objectives.

Short-Term Behavioral Objectives. Within each long-term objective, there may be a progression of tasks, from easiest to hardest, that eventually will enable the student to accomplish the objective. This is the sequence to be followed when teaching the long-term objectives.

Conclusions

The development of teaching programs for severely handicapped,

deaf-blind students requires the careful selection of objectives to be taught. While input concerning normal development may provide a teacher with valuable suggestions, these sequences must be supplemented with additional information in order for tasks to be functional and age appropriate for a population that is generally older and substantially more handicapped than the population representing the norm. In addition, the scope of essential skills that will enable the handicapped individual to access the same types of opportunities available to nonhandicapped individuals must be described. Through a continual process of systematic curriculum evaluation and curriculum development, teachers will begin to solve the programming dilemmas they currently face.

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Table 1

Development of Play (after Parten)

Autistic Level

-little or no awareness of environment

Unoccupied Level

-some awareness of environment
-no attempt to interact with environment

Independent Level

-isolated play with toys or objects

Observing Level

-approaches activities and observes
-no attempt to be involved

Attempted Interaction Level

-initiates some interaction
-attempts to engage in some activities

Parallel Interaction Level

-plays independently close to others

Associative Interaction Level

-plays with others
-activities require little mutual participation

Cooperative Interaction Level

-interacts with others
-activities require mutual participation

Table 2

Curriculum Components

Placement in Curriculum

1. Procedures for assessing prerequisites to total curriculum and individual skill areas.
2. Procedures for assessing entry level to curriculum.
3. Procedures for assessing continuation in curriculum.

Development of Objectives

4. Longitudinal curriculum sequence.
5. Terminal objectives.
6. Strategies to promote flexibility in sequencing objectives.
7. Prerequisites for terminal objectives.
8. Rationale for objectives.
9. Short-term objectives (for terminal objectives).
10. Criterion statements for objectives.

Teaching Procedures

11. Functional activities to teach objectives.
12. Age appropriate activities to teach objectives for a variety of ages.
13. Age appropriate materials for activities.
14. Data collection procedures.
15. Data collection forms.
16. Reinforcement procedures.
17. Error correction procedures.
18. Procedures for assuring maintenance.
19. Activities/procedures to assure generalization across people, places, materials, and cues.

Table 3

Curriculum Development

I	Programming Area of Concern Ex. Restaurant eating	
II	Relevant Components Ex. Receives Declines to Receive	
III	General Goals	
	Ex. Indicates yes or no	Ex. Responds to request to pass items located on the table
IV	Long-Term Behavioral Objectives	
	Ex. When S is asked if he or she wants an item of food (familiar) S will indicate yes or no Independently on 3 occasions	Ex. When S is asked if he or she will pass an item of food (familiar) S will pass the requested item Independently on 3 occasions
V	Short-Term Behavioral Objectives	
	Ex. 1. When presented with 2 items of food, S will point to 1 on request. 2. When presented with 2 items of food and asked sequentially "Do you want ____?" S will answer yes/no consistent with point response (food visible) 3. Same as 2 (food not visible)	Ex. 1. When asked to pass the only item of food within reach, S will pass the food. 2. When asked to pass 1 of 2 items of food within reach, S will pass the appropriate food. 3. When asked to pass 1 of 4 items of food within reach, S will pass the appropriate food.

WORK SKILLS

A COGNITIVE APPROACH TO PREVOCATIONAL AND DAILY LIVING SKILLS TRAINING: RATIONALE AND IMPLEMENTATION

Carmella Ficociello

Educators of deaf-blind children have for several years searched for a philosophical, theoretical construct to serve as a basis for planning effective educational plans for these children. The trend has been to use an eclectic approach to planning which includes borrowing from and adapting various curriculum approaches currently popular in special education such as behavioral/task analysis, Montessori, clinical/prescriptive teaching, competancy-based education, and unit-planning. Each of these approaches afforded excellent methods and classroom activities, but an underlying philosophical construct was missing.

In the past few years, educators have found a cognitive developmental philosophy, particularly the theory of Jean Piaget, to be an effective construct for developing programs for deaf-blind children.

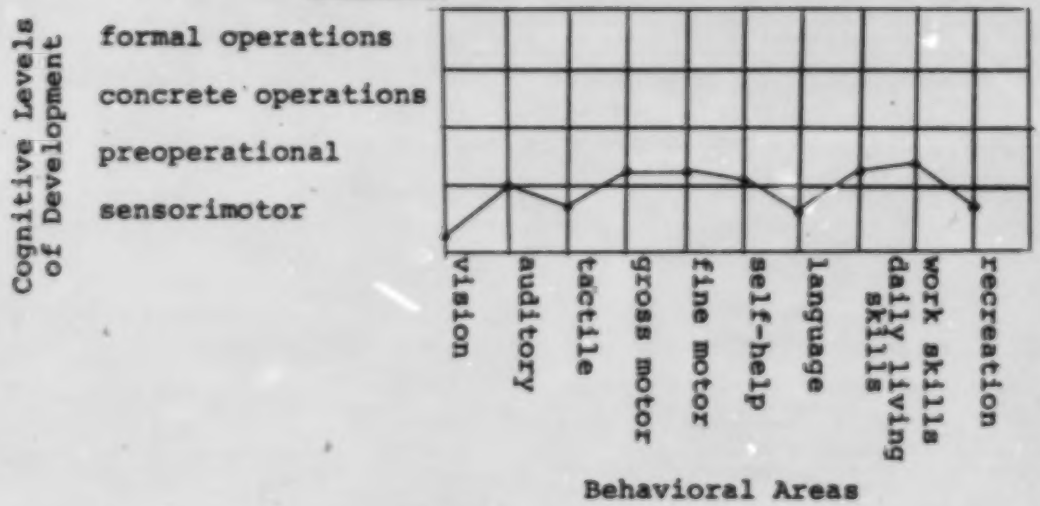
Figure 1

Piaget's Theory of Cognitive Development

1. Sensorimotor
2. Preoperational
3. Concrete Operations
4. Formal Operations

Piaget's cognitive development reflects and is interrelated with the levels of functioning in each of the behavioral areas emphasized with deaf-blind children. Figure 2 below more clearly depicts the relationship of cognition to other behavioral areas.

Figure 2



The goal of education of deaf-blind children has been defined by Hammer (1975) as "the movement of the learner from some level of dependence to some level of independent functioning."

Figure 3

Dependence ——————→ Independence

By assessing the level of cognitive development as well as the child's level of functioning in each of the behavioral areas, the teacher is provided with baseline data for planning effective goals and objectives to be included in an Individual Educational Plan (IEP) for each deaf-blind child. For example, if the child is visually functioning on a very low sensorimotor level as can be observed when he or she looks at and plays with objects, but does not search for them if they are dropped, then the teacher would develop goals, objectives, and activities for the child to develop visual pursuit behaviors which lead to object permanence.

Teachers still use an eclectic approach in planning methods and activities, using the various methodologies mentioned previously, but education now has an underlying philosophical construct which facilitates more appropriate decision-making in planning effective IEP's for deaf-blind children.

One of the major behavioral areas in deaf-blind education, one that pervades all other areas, is language. Teachers have found Jan Van Dijk's theory of utilizing a motor emphasis to develop language to be especially effective with deaf-blind children. The Van Dijk approach blends well with the Piagetian developmental construct, and strong language programs have been developed.

Expansion of Curriculum: Prevocational Programming for Deaf-Blind

If deaf-blind children reach the preoperational level of development, usually they have been taught traditional preschool activities and readiness skills to prepare them for academic elementary education. They have been taught concepts of classification, seriation, spatial and temporal relations, play and social skills, and language, with the long-range goals of reading, writing, and math.

However, such long-range goals are very limited and may not even be realistic expectations for deaf-blind children. Many of these children may learn some skills in reading and numbers, and if they are able to learn these, they should and must be taught. But emphasis only on such goals does not fully prepare these children for living in the world as adults. They must also be taught work and living skills.

Thus, deaf-blind education has begun to emphasize the importance of prevocational and vocational programs. Many teachers of

deaf-blind children have been uncomfortable about this prevocational programming for deaf-blind children because they feel it is an end to the child's education. They have too often seen prevocational programs where children are only taught work skills, and their language and cognitive growth are forgotten. Too often prevocational programs for deaf-blind children have emphasized learning work tasks without consideration of prerequisite intellectual development or a hierarchy of learning. Children are taught to sort nails, screw bolts, or assemble various objects. The emphasis has been on learning the work task and not on developing concepts and generalizing behaviors to a number of situations. Children learn to sort nails rather than learn the concept of sorting by learning to sort not only nails, but clothes, silverware, and coins, for example. Other areas important for adult living such as recreation, home management, sex education, and orientation and mobility have often been neglected or ignored altogether. The problem with prevocational programs for deaf-blind is that they lack the philosophical construct to provide for the total development of the individual. If deaf-blind children are to develop to their fullest potentials, to whatever level of independence they are able to reach, educators must look at more realistic long-term goals for living and working in society. Totally academic programs are not realistic; programs emphasizing only work are not realistic either. Realism is planning programs for deaf-blind children that teach them work and daily living skills and at the same time teach them language or reading and math or whatever they have the potential to learn. Prevocational programs must be an expansion of, not an end to, educational programs.

This total development can be achieved by using Piaget's preoperational level of cognitive development as the construct and a prevocational, daily living skills setting as the learning environment. The goals and objectives remain the same - children at preoperational levels learn classification, seriation, and spatial and temporal relations, but the activities and materials are those of the prevocational/daily living skills environment. The environment also allows for the development of motor, language, numbers, and reading. Thus, educational and prevocational programs are meshed and expanded, and the long-term goals for deaf-blind children are more realistic and assure greater independence for each child.

A Cognitive Approach to Prevocational and Daily Living Skills Training provides this cognitive development framework to assist teachers in assessing a deaf-blind and multihandicapped individual's levels of functioning and in planning effective prevocational and daily living skills programs for him or her. The assessment tool and suggested activities help to assure the development of concepts and the generalization of these concepts to other life situations. One caution for persons using the guide: it is not a curriculum,

but rather it is a developmental guideline for individual educational planning in the areas of prevocational and daily living skills training. The teaching team must incorporate other areas of programming in order to assure a total curriculum for the child.

Definition of Terms

Because the terms "prevocational training", "daily living skills", and "cognition" have many different meanings, they are operationally defined for purposes of this guide:

Prevocational Training: A program which introduces the client to the meaning of work in society, the characteristics of successful employees, the expected characteristics of an employer, and the responsibilities of wage earners, and which prepares him or her to participate in, and profit from, additional structured vocational instruction. (Cawood and Tilton, 1974)

Daily Living Skills Training: Training in those physical, emotional, and social skills which prepares an individual for semi-independent or independent living, including basic self-help skills, health and safety, food preparation and management, care of clothing and living environment, recreation and leisure-time activities, social/affective development, and sex education. (Ficociello and Stoddard, 1978)

Cognition: The development of logical thinking so that the individual has the ability to reason in new and on-going situations. (Fitzgerald, 1978)

> The growth of the individual's intellect from the point of view of its developing relationships with the world of objects and people around the individual. (Boyle, 1969)

Discussion of Chapters and Training Module

A Cognitive Approach to Prevocational and Daily Living Skills Training consists of two parts:

1. A competency-based, multi-media instructional training module.

2. A training guide for teachers in planning a prevocational and daily living skills program.

Training Module

The training module consists of a number of videotapes, readings, group practice sessions, and worksheets. It is designed to be used by a group facilitator to train teachers and other staff

members who will be using the Guide. Persons using the module must demonstrate competency in the following areas by reaching 90 percent criterion on the post test. Information is included in the module on:

- Piaget's theory of cognitive development
- Van Dijk's approach to language development
- Gold's task analysis methods
- Stoddard's rules for training
- The total child approach to individual educational plan development
- Training in the use of the training guide

It is imperative that persons using the training guide first participate in a training session with the module. Efficient use of the training guide is dependent on a strong knowledge of, and competency in, the theories and methods covered in the module, and this competency can be gained by participating in the module and by reading the preliminary chapters in the guide.

If a person already has sufficient knowledge in these areas, he or she can test out of the module by reaching 90 percent criterion on the pre-test.

Training Guide

The training guide includes several chapters on Piaget, Van Dijk, Marc Gold, and Denis Stoddard which are used in conjunction with the training module and also are incorporated into the guide for the teaching team's reference and use in the program. The guide also contains information on the total child approach to individual educational plan development:

- Assessment via the Callier-Azusa Scale and assessment of Prevocational and Daily Living Skills
- Developing an IEP using A Cognitive Approach to Prevocational and Daily Living Skills Training
- Activities to include in the program
- Planning and organizing the environment
- Methods of documentation and evaluation
- Social/affective development in family and family-like systems
- The rehabilitation process: working with rehabilitation personnel to assure vocational programming
- Alternative living settings

Again, it is imperative that the training guide be used only after training in its use via the training module. Use of the guide without sufficient knowledge will result in poor planning and splintered learning in deaf-blind and multihandicapped children.

Population

A cognitive approach to prevocational and daily living skills is designed for use with deaf-blind and multi-handicapped children who are functioning at at least 18 months in cognitive development as measured by the Callier-Azusa Scale and who are at least 10 years old chronologically. A child may be functioning at lower levels of development in other behavioral areas due to sensory or motor deficits.

Overview to using the training guide: The total child approach to individual educational plan development*

Once the teacher has gained sufficient knowledge of the theory and methods discussed in various chapters of the guide, he or she is ready to relate theory to practice by using a process to incorporate this information into an individual educational plan (IEP) for a child. The process used in A Cognitive Approach to Prevocational and Daily Living Skills Training is called the total child approach to IEP development. The philosophy and process of the total child has grown out of the work of Dr. Edwin K. Hammer, Mary Ann Mariani, and Carmella Ficociello of the South Central Regional Center for Deaf-Blind Children in Dallas, Texas. The total child approach is discussed here as it relates to prevocational and daily living skills training.

The total child approach is not a curriculum or a method, but rather it is a philosophy of looking at the level of cognitive development of an individual child, with particular emphasis on what he or she can do, not on what he or she cannot do, and planning a total educational program for that child.

Before discussing the total child approach to education more specifically, it is first necessary to review the definition of education. For purposes of this discussion, education is operationally defined as the movement of the learner from some level of dependence to some level of independent function (Hammer, 1974). Thus, the traditional concept of education as the 3R'ε - reading, 'riting, and 'rithmetic, gives way to a new concept of education for all children to help each child become as independent as possible. Implicit in this definition is the consideration of the individual needs of a child and the development of an individual educational plan to meet those needs.

In order to develop such an educational plan, it is necessary to look at the total child. Each child exhibits several systems of behavior - physical behavior, social behavior, mental behavior, and emotional behavior - which can be further subdivided into visual,

* Portions of this section were printed in The Deaf-Blind Child: Determining a Direction, published by the Northwest Regional Center for Deaf-Blind Children, Seattle, Washington, 1975, or in Process Teaching and the Deaf-Blind Child, South Central Regional Center for Deaf-Blind, Dallas, Texas, 1974.

auditory, language, work skills, and daily living skills. However, these behaviors are not separate entities occurring independently or at different intervals from each other, but rather they are integrated, often simultaneous occurrences.

Let's look at eating as an example: Children pick up a spoon, put it in the bowl, scoop food onto the spoon, lift the spoon to their mouths, put the food in their mouths, chew it, and then swallow. How many systems of behavior do we see in this simple activity? First of all, there is physical behavior - vision is used to locate the spoon and in conjunction with motor behavior to move toward the spoon, pick it up, and put it in the bowl. There is social behavior in eating neatly, slowly, and in using a spoon. There is mental behavior in the routine and sequence of eating, the discrimination of type of food, and the motor planning in eating. Perhaps the emotional behavior would be the enjoyment of the food being eaten. In this simple activity we see the integration of all the systems of behavior.

As children grow and develop, they reach higher levels of functioning in each of these behavioral areas. These levels of functioning reflect and are very interrelated with their levels of cognitive development. Therefore, cognition is not just another subject area to be taught in the classroom; rather, children's levels of cognitive development must be interrelated with their levels of functioning in the various behavioral areas when planning goals, objectives, and activities for children in order to assure total child development.

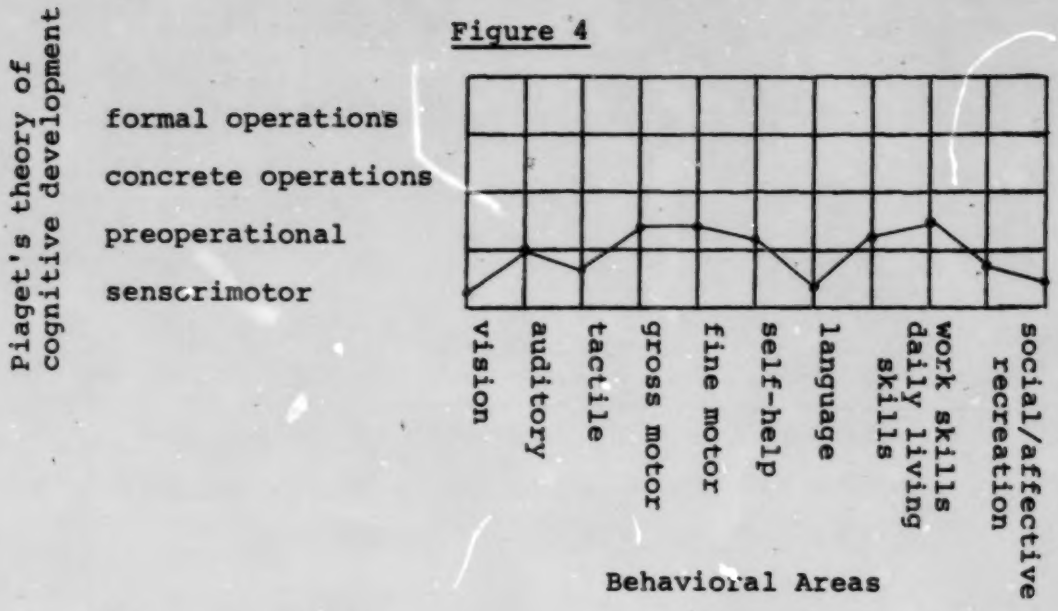
For example, as children develop visual functioning, they look at objects and develop interpretations (perceptions) of these objects based on their levels of cognitive development; simultaneously, their cognitive development is affected by the new visual input. The interrelationship of visual behavior and cognition becomes even more obvious in this example. When children drop objects and search for them, they are beginning to understand that objects exist even when they cannot see them (cognition); when they locate an object they have played with the day before in the place where they left the object, they are incorporating vision and memory. Memory is a cognitive behavior.

Let's review the diagram (Figure 4, next page) which depicts the relationship of cognition to the behavioral areas.

Let us say, for example, that the child is on an early preoperational level in his or her work skills, which can be observed in his ability to sort objects of two or three different shapes. Once this level is identified, goals and objectives can be designed to move him or her to a higher preoperational level, such as sorting by size.

After the teaching team has assessed the level of cognitive

Figure 4



development in each of the behavioral areas, it becomes an easier task to develop an IEP with goals and objectives to move the child to higher levels of functioning in each of the behavioral areas. What does all of this tell us about educating children?

1. It tells us that by designing separate activities to teach isolated behaviors (i.e., visual activities, auditory activities, self-help activities), we are only developing splintered skills which often have little or no relevance to real life situations.

2. It shows us the importance of designing activities which incorporate several behaviors into a realistic situation (i.e., developing cognitive, language, and daily living objectives through the activity of dishwashing).

3. It also demonstrates the importance of the child's being involved in the total process of an activity, even though the objectives for that activity may vary according to his or her developmental level. For example, the child is involved in the total process of dishwashing (putting water in the pan, putting in detergent, washing dishes, pots, and pans) even if your objective for him or her considering his or her development level, is that he or she only learn to wash plates, cups, and glasses.

The above three points are the whole emphasis of the total child approach. The teaching team develops an individual education plan for the total child through a process of:

Assessing his or her levels of cognitive development and his or her development in each of the various behavioral areas.

Developing measurable goals and objectives to move him or her to higher levels of functioning in the various behavioral areas.

Designing activities which integrate these behaviors in a holistic, realistic environment, using realistic materials.

The Process

Thus far this discussion has centered on the "why" of the total child approach. It is necessary next to discuss the "how" - the process of developing an individual educational plan for a deaf-blind child.

Rather than use one teacher to complete this task the author suggests that a teaching team complete this task. The teaching team is similar to an interdisciplinary team in medicine in that it is comprised of all the people who are involved with a particular child: teachers, parents, aides, physical therapist, occupational therapist, social worker, speech and language therapist, workshop supervisor, rehabilitation counselor, etc.

The parents of the child are very important members of the team and should be part of the entire IEP process. Parent involvement is not always easy to establish, but it is a very important aspect of the program, because it not only increases carryover of the program in the home, but also helps to assure involvement and programming for that child throughout his or her lifetime.

The use of a teaching team allows for the sharing of strategies, specializations, and methods in assessing the child's developmental level and in planning and implementing the individual educational plan.

In order to incorporate the total child approach into the educational program, a format is needed. This format consists of four steps:

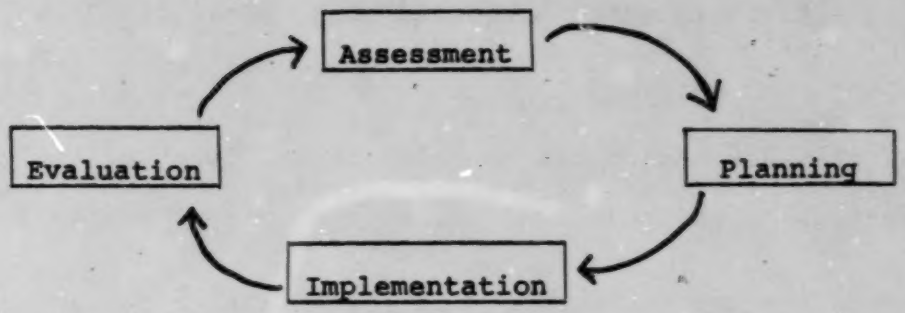
1. Assessment
2. Planning
3. Implementation
4. Evaluation

Initially these steps occur in a progression.

Assessment → Planning → Implementation → Evaluation

However, what starts out as a linear progression becomes a cyclical process, since assessment, planning, implementation, and evaluation are ongoing in educational programs throughout the child's educational lifetime, and therefore the model is as follows:

Figure 5



Step 1. Assessment

When assessing the child, we are observing his or her developmental level in each of the various behavioral areas. The determination of the child's current level of functioning in each of these behavioral areas is our primary concern because it is the starting point in planning the educational program. Focus should be placed on what the child can do, not what he or she cannot do. It is much easier to develop an IEP based on information about what the child can do and to plan goals and objectives for continued development.

As previously stated, it is necessary to plan integrated activities to develop the total child, but in assessing the child, it is necessary to observe these behaviors separately in order to assess levels of functioning in each area and any problems due to deficits. The child's levels of functioning in each specific behavioral area are used as baseline data to develop the goals and objectives for the IEP.

Four types of assessment information aid the team in observing these behaviors:

1. Standardized tests may be used when and if applicable; experience has shown that these tests give more information on what the child cannot do than on what he or she can, and this does not aid in planning for these children.

2. Medical information about the child's physical problems and their relationship to the child's ability to develop some levels of functioning in his or her visual, auditory, or motor behavior is a help in planning.

3. Developmental scales such as the Callier-Azusa Scale or A Manual for the Assessment of a Deaf-Blind Multihandicapped Child are probably the most useful sources of assessment information on

deaf-blind children. They include those which cover the various behavioral areas and those which assess cognition. These scales give the team information about the child's level of development in each of the behavioral areas. They may also be used as a pretest and post test measure of progress in these children. For example, using a developmental scale of cognition, the team observing the child records as a pretest measure that the child is able to sort objects of two or three different shapes, but he or she is not yet able to sort by size or color. This assessment gives the team information for planning an IEP for the child in which emphasis is placed on learning to sort by size and color in a variety of different activities. The post test evaluation using the scale is a record of whether the child has made progress in these areas.

4. Informal observations of the child should also be recorded. Included here are the behaviors that are part of that child's individual personality. These factors are important to note because they will make the difference in whether the IEP for the child will meet his or her individual needs. Included are such behaviors as child's interests and favorite objects, attention span, self-stimulatory behaviors, emotional or behavior problems, dependency on routine, effect of deficit area on other areas of functioning, responses to change in environment, and rate of learning.

The Curriculum Guide contains a developmental scale called Assessment of Prevocational and Daily Living Skills Training. It contains eight subscales: Food Preparation and Management, Care of Living Environment, Care of Clothes, Work Skills, Social/Affective Development, Recreation, Sexual Behavior, and Health and Safety.

Step 2. Planning

Once all of these observations have been compiled, it is time to develop the written Individual Educational Plan for the child. The components of the IEP are:

Life goals
Long-term goals
Short-term goals
Activities
Material/equipment
Evaluation/documentation procedures.

The Guide contains definitions and examples of these IEP components and an activities section that lists in developmental sequence the various activities that relate to the subscales of the assessment (ex. food preparation and management includes activities for dishwashing, setting the table, cooking food, shopping, etc.)

The process for developing the IEP is that the teaching team,

using the assessment information as baseline data, first develops the long-term goals and short-term objectives for each behavioral area. Once all the goals and objectives are written, the team then designs the activities to meet these goals and objectives. Several objectives should be incorporated into each activity (i.e., language, motor and food preparation objectives) so that behaviors are integrated and the development of the total child is assured.

Three important points to remember when planning activities and materials to use with a child are: (1) to structure the environment rather than to overly structure activities, (2) to involve the child in the total aspect of the activity rather than just the one aspect that is your objective, and (3) to teach these activities in the context of the daily routine. One example can be used to illustrate all three of these points:

If your objective in dressing is that the child learn to pull up his or her pants independently, then it is important that:

1. The activity occurs in the bedroom or locker room or other appropriate area for dressing, not in the middle of the classroom.

2. The child goes through the entire process of dressing, not just pulling his or her pants up and down 20 times.

3. Dressing occurs in the morning or before and after swimming or other appropriate times, not in the middle of the day.

Once all the goals, objectives, activities, and materials are decided on, methods of evaluating/documenting progress on these objectives should be established. This documentation may be in the form of graphs, checklists, or anecdotal records, depending on the activity and the teacher's preference.

Step 3. Implementation

The next step is implementation, which involves carrying out the planned activities and documentation on a day-to-day basis. Implementation is the actual teaching/learning situation. Probably what is obvious at this point is the amount of time spent in assessing and planning that occurs prior to teaching. Many persons have difficulty with this concept; they feel that they have to rush right in and teach, teach, teach, without spending time getting organized. It is time for teachers and administrators to accept the fact that it is <u>all right</u> to spend time assessing and planning, even if it takes several weeks to complete plans for all the children in the class, because this process will assure quality programming that meets each individual child's needs.

Two important tasks of the implementation steps are: (1) setting up the learning environment as previously discussed, and (2) setting up daily schedules. Organizing an effective schedule that provides sufficient time for all of the activities of each of the children in the class and opportunities to work with the teacher, aides, physical therapist, occupational therapist, and language therapist is probably the most difficult task in the field of education! But it is also a very necessary one if the program is going to flow smoothly and progress is going to be made.

Step 4. Evaluation

Evaluation of the child's progress includes both formative and summative evaluation. Formative evaluation is the daily and weekly evaluation of the child's responses during the various activities. This documentation provides information as to the child's progress toward meeting the short-term objectives and the long-term goals. The evaluation may be in the form of graphs, checklists, or anecdotal records.

Summative evaluation is the summary evaluation, the complete review after a period of time of all goals, objectives, and activities. It is suggested that summative evaluations be completed at least every six months. The information gathered from the summative evaluation is used with continued observation of the child to develop the next or revised educational plan for the child.

In this way, the cycle of assessment, planning, implementation, and evaluation continues throughout the education lifetime of the deaf-blind child, and the development of the total child is assured.

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Portions of this paper were previously printed in A Cognitive Approach to Prevocational and Daily Living Skills Training, by Carmella Ficociello and Ann Stoddard, published by Mountain Plains Regional Center for Deaf-Blind, Denver, CO, 1978.

PREVOCATIONAL PROGRAMMING AT THE DEAF-BLIND ANNEX TEXAS SCHOOL FOR THE BLIND

Annie B. Wade

Program Structure

The Deaf-Blind Annex of the Texas School for the Blind is a residential program serving 32 children. Included in the educational planning for each child is prevocational training. The present prevocational program is beginning its third year of operation. The entry requirement for prevocational is that a child must have grasp and be able to sit at a table for five minutes with adult present.

Two prevocational staff members serve 32 children. The 18 lower-functioning children receive two sessions of work skills training a week, with each session lasting 20-30 minutes. The 14 higher-functioning children receive one hour of work skills training and at least one hour of work tolerance training each week.

The physical facility for the prevocational department consists of two rooms. One room has equipment and materials for woodworking projects. Both rooms are equipped with tables and chairs for work skills training. The adult/student ratio is 1:1 for the lower-functioning child and 2:3 or 3:4 for higher-functioning children. The majority of the children served are Rubella deaf-blind.

Rationale

Traditionally, prevocational training was considered important only for teaching specific vocational-related jobs to teenagers and/or handicapped adults of normal or near normal development. Very little consideration was given to teaching basic skills that might be generalized to numerous work jobs. The staff of the prevocational department at the Annex believes that early intervention is very important to the deaf-blind, severely handicapped child. In The Developmental Therapist, Banus suggests that prevocational tasks are those tasks which help to develop behaviors important to work. Functional work-oriented behaviors are taught from the toddler years (Banus, 1971).

Prevocational training can be an integrated part of the individual educational plan (IEP) of deaf-blind children. With the low-functioning deaf-blind child, the program should begin with the training of basic skills such as refining grasp, eye-hand coordination, left-right orientation, and sequencing. These serve as prerequisite skills to the vocational training of higher-level children.

Many older children do not have the motor skills needed to function at optimum efficiency. They did not have the experience of manipulating objects during the sensorimotor period of development, and although the older child may be functioning at Piaget's preoperational level of development, he or she needs to

be taught fine-motor skills of twisting, turning, and appropriate grasps not learned earlier.

Our main area of emphasis is teaching work skills and work-related tasks. This will provide the child with skills that can be generalized to many different work, leisure-time, and living experiences.

Planning to meet each child's individual needs means adapting the task to the child. It is important to know the child and to use tasks that are interesting and stimulating to him or her. Using materials in a task that provide a sensory experience will often encourage the child to react to that task. Using clusters of tasks which require similar motor skills can prevent boredom in the low-level child. After a task has been presented several times, present another task from the same cluster several times before returning to the first task. For example: A child might put marbles into depressions on a linear plane moving from left to right for a few days and then put small wooden cylinders onto pegs placed on a linear plane moving left to right for a few days. Both tasks would require pincer grasp, exact placement, and left-to-right orientation.

Future Placement

The future of deaf-blind children is a major concern of staff members and parents. Will all deaf-blind children go into a workshop setting? There are four areas of possible placement for the deaf-blind: industry, sheltered workshop, work activity center, and custodial care. At age 22, when educational services end, placement into one of the situations will be determined. It is our hope that only a few children will need custodial care. A sheltered workshop would provide remunerative employment or other rehabilitative activities with wages not less than 50 percent of minimum wage. A work activity center would provide therapeutic activities for those whose impairment is so severe as to make reproductive capacity inconsequential (Opinion Research Associates, Inc., 1975).

Prevocational training is important to the development of a total person. All children should have the opportunity to develop work skills, whether placed in a workshop or a custodial setting. Work skills are relevant to any living or working environment. Future living placement can be determined by skills learned in prevocational training. Some of these skills might be the development of cleaning skills, good work behaviors, independence, and self-appreciation. The development of worthwhile leisure time activities and social interaction skills is an important criteria for future living placement. Activities such as gardening, crafts, woodworking, and games prepare the child for leisure time.

Prevocational Education

As part of the total program for each child at the Annex, prevocational goals are integrated with the educational program of the individual child. The provision of a consistent approach to teaching the various skills needed in a child's life is very important.

Teachers should inform prevocational staff members of such things as the cognitive functioning level of the child, signs, type of language system (manipulated, syntax, oral, signs) used, amount of expressive and receptive language, and math concepts (1:1 correspondence, counting and conversion of money). The prevocational staff should provide teachers with information concerning functional academics needed in a work setting, prehension patterns and motor planning required for manipulation of work materials, work habits, and routines a child needs to learn for future living and working situations. In this way integrated goals for the child's IEP can be written.

Areas of Emphasis

Three main areas are stressed during work training time in the prevocational program: (1) developing good work habits, (2) teaching work skills, and (3) developing work tolerance.

Good Work Habits

Good work habits prepare a child for work and future living situations, orientation to environment, and internalization of a routine.

The higher-level children are expected to be neat and clean while in the work training environment. Personal cleanliness is emphasized by requiring each child to check his or her appearance in the mirror. The instructor will discuss his or her appearance and help determine areas that need improving. The child will make any necessary corrections to his or her appearance before going to work.

Closely related to personal cleanliness is the child's awareness of his or her environment. Some activities used to encourage environmental cleanliness and organization are: (1) assigning specific cleaning jobs in the woodworking room such as sweeping, cleaning the sink, brushing off the table, cleaning the windows, dusting the woodwork, and carrying out the trash; (2) obtaining and returning materials to the proper place after completion of a task; (3) organizing work, i.e., setting up the work task assigned before performing the task; (4) assigning each child a specific work station in the training room where he or she performs tasks, and (5) asking each child to clean his or her own work station and work area in the woodworking room.

Children learn proper care and use of materials during time spent in the woodworking room. Many of the projects involve building work tasks, assembly trays, and mending broken items for the school. The tools used are saws, hammers, wood clamps, rulers, scissors, power sanders, drills, and paint brushes. The children use newspapers when using glue and paint and are required to clean up a mess and return all tools to the designated place.

Independent travel to the work training room from the classroom is a goal for all of our children. For the low-functioning child, the teacher must always come with him or her. As the child becomes familiar with the routine, the teacher allows the child to travel the last few feet alone. Gradually this distance is increased. The higher-functioning children can be told (signed to) in the classroom that it is time to go to the work training room and can go by themselves.

A "checking in and out" system has been established for both higher and lower-functioning children. It is important for the child to be aware of the beginning and end of work time. To accomplish this, aprons are used with the low-level children, and a card system is used with higher-functioning children. When the child puts the apron on, it is a signal to him or her that it is time for work training; when the apron is removed, work training is finished. The higher-level child must locate a card with his or her name on it from a board where cards for all high children have been placed. On one side of the card is a column of green dots and a column of red dots. The child uses a hole punch and punches in on a green dot and out on a red dot. The purpose of the cards is to help prepare the child for using a time clock in a work setting.

It is important for children to become familiar with a work routine. The normal sequence of the work routine for high-level children is:

1. Punching in on a green dot on his or her "time card";
2. Checking appearance in the mirror;
3. Looking at the work job calendar to determine assigned tasks for the day;
4. Selecting assigned task, performing task, and returning task to its proper place;
5. Upon completion of assigned tasks, going to the woodworking room to work on a project;
6. Punching out on a red dot.

The basic routine for lower functioning children is:

1. Putting on a yellow apron;
2. Traveling to the work room;
3. Selecting a work task from assigned work shelf;
4. Taking work task to work station, performing task, returning task to shelf;
5. Leaving work training area and removing apron.

Children are to maintain appropriate behaviors while in the work setting. Each child is encouraged to stay on task with minimum self-stimulatory behaviors. Children are expected to work through any tantrums that might occur and to complete the work training session. It is also important that a child learn to ask for help or materials, when needed, by the use of gestures or formal language.

The prevocational staff consults with the teachers regarding the language of each child and the techniques used to encourage communication within the work skills setting. It is relevant to know the expressive and receptive language of each child, whether the child is using gestures or formal signs, oral and/or signs. Beginning with the lowest-functioning child, the apron is used as a signal for work skills training. Any sign of anticipation by the child is observed. As the child's language system increases, gestures and pointing are used for prompting or to provide information for the child. Pictures and drawings of actual objects and tasks are used, as well as drawings of symbols that represent certain tasks for children functioning at the appropriate level. The child may be allowed to choose a picture and obtain that task from his or her shelf, thus encouraging his or her own expressive language. Opportunities are provided for those who sign to ask for help or additional materials.

A breakfast program is available for those children with independent skills sufficient to function with minimum adult supervision. Currently, there are eight children, with one adult for each two children. The program consists of selecting foods, setting the table, cooking, and cleaning.

Work skills

The second, and perhaps the most important, area of emphasis in our prevocational program is developing work skills (manipulating objects and performing tasks). When planning work skills tasks, it is important to plan the tasks to meet the needs of the child. The lower-functioning children are performing in what Piaget calls the "sensorimotor period" of development. Because of the sensory deprivation, it is important that the child's experience with objects include the integration of all perceptual systems (Banus, 1971). Many higher-functioning children have problems manipulating tools because they did not have enough early sensori-perceptual motor experiences. When working with lower-functioning children, some points to remember are:

1. Begin with short tasks of one minute or less.
2. Ascertain that all tasks have a definite beginning and end.
3. Stress attention to tasks and interaction with objects.
4. Manipulate the child physically through the task in the beginning.
5. Provide many trials of the task so the child will have much needed sensori-motor feedback through manipulation of the objects.
6. Emphasize the development of good prehension patterns.
7. Behaviors such as self-stimulation and tantrums can interfere with task performance.
8. The work skills developed are prerequisites for the child's becoming a higher-functioning child.

Work skills training for higher-functioning children is an expansion of skills learned earlier.

1. Work tasks are more difficult and take longer to perform.
2. Prehension patterns are refined.
3. Tasks require more difficult motor planning, memory, and fine-motor skills.
4. A task is learned in fewer trials.
5. Abstract symbols are used to designate task assignments.
6. Pictures are used in combination with printed names or signs.
7. Modeling or signs can be used for giving instructions.

Three different types of tasks are commonly used in the workshop setting. They are sorting, packaging, and assembly. Tasks are specifically designed to teach work skills in these categories. Each time a child comes for work training, he or she is assigned three tasks, one from each category. Within each category a child will learn such skills as pincer grasp, eye-hand coordination, left-to-right orientation, and copying a model.

Developing Work Tolerance

The final area emphasizes development of the ability to tolerate working for a longer period of time, usually on monotonous tasks. Twelve of the higher-functioning children spend approximately one hour each week in the work tolerance program. Each is assigned a task that he or she has previously learned during work skills training. The choice of a task is determined by the child's ability to perform that task, since our purpose is not to teach the task but rather to do the following:

1. Develop independence in the child,
2. Increase the production rate of the child,
3. Teach quality control,
4. Teach the concept of earning money for the product,
5. Help the child learn to tolerate the monotony of repetitious work.

Documentation

Tools for evaluation and documentation are not standardized tools, although the BCP has been administered to some of the higher level children, and one child was tested by the Educational Service Center using the Minnesota Rate of Manipulation evaluation. The tool used at the Annex is an evaluation compiled by Gretchen Stone, Prevocational Coordinator at the Annex. It provides the information necessary in the areas of emphasis previously discussed. Further evaluation is based on the data gathered from documentation after working with the child.

Different types of documentation are used for lower- and higher-functioning children. Documentation for lower-functioning

children includes:

1. Description of the task;
2. Number of trials and dates of the trials;
3. Instructional, physical, verbal/gestural prompts;
4. Errors;
5. Amount of time spent performing task;
6. Space for comments.

Documentation for the higher-functioning children is kept on a chart with six spaces for recording data. The top three spaces record performance, and the bottom three spaces record the date of each trial. Criteria for passing a work task are:

1. No errors;
2. Completion within 15 minutes;
3. Two prompts or less;
4. Three attempts are allowed on each task--if not successful on the third trial, the task is dropped until later; and
5. Performance of task is validated after one month has passed.

Data kept on work tolerance jobs are:

1. Date and amount of time spent at work,
2. Job-unit description,
3. Number of units completed,
4. Price per unit, and
5. Payment for job.

Conclusion

The prevocational department of the Texas School for the Blind's Deaf-Blind Annex serves all children in the program because its staff members believe that all children should be given this opportunity. We further believe that the skills learned in the prevocational department will be useful for future working and living in any environment. We emphasize training in developing good work habits, work skills, and work tolerance in a way that will meet the needs of each child as an individual. To encourage the development of a total person, evaluation and documentation are developed and adapted to help the staff members provide a program suited to each child.

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COMMUNICATION

Q: WHY DO CHILDREN ACQUIRE LANGUAGE?
A: JUST BECAUSE.

George Branigan

Virtually everyone has a sensible explanation for how children learn language. A six-year-old may, for example, report that a younger sibling learned to talk by repeating words heard from others. Or he or she may respond, when asked how children learn to speak, that they "just do." A parent, on the other hand, would probably reject the suggestion that children learn to talk because they "just do." In fact, the parent would be more inclined to agree with the first explanation, and indeed might throw in the self-serving supplement that they taught their children to speak, and to speak correctly at that. A teacher might echo the parents' assessment and support this explanation with theoretical accounts of how learning occurs. The teacher's description might give names to processes that the parents intuitively knew must be responsible for their children's remarkable achievement but, lacking the jargon of educational psychology, could not supply imitation, correction, shaping, selective reinforcement, trial-and-error, reward and punishment. The teacher's only disagreement with the parents might be whether the children had been taught to speak correctly and, in the privacy of the teacher's lounge, the teacher may lament that although the children are speaking, they still do not know their grammar.

Despite the consistent thread which weaves its way into all the respondents' answers, each views the question differently, and each is using different evidence for his or her answer. The child may interpret the question to mean, "How or when does a younger child talk." His or her casual observation (from a self-centered point of view) is that the younger child responds by repeating a word or phrase the older child has used in a direct interaction. It is their limited scope which determines their answer.

Parents may correctly interpret the intent of the question and focus on learning to talk rather than occasions when talk occurs. Their responses, too, may be limited by casual impression. The evidence most salient to a parent is the attempts they make at providing a model for the child to follow and attempts to correct their children's speech errors. Noting that their children made certain mistakes when speaking, remembering their corrections of those errors, and observing later improvement (reduction of errors) leads the parents to report the impression that they have taught their child to speak.

A teacher's perception of the question may be influenced both by professional training in learning theory and by daily experience instructing children in subject-verb agreement, writing complete

sentences, defining subjects, predicates, adjectives, and the like. Here, an awareness that practice, correction, and reinforcement are mechanisms for learning to consciously control grammatical forms may be used retroactively to explain (in a similar fashion) how learning to talk was achieved in the first place.

In all cases of this over-simplified and rigid scenario, the question itself has been misunderstood. But predictably so. It is only in recent years, under the influence of linguistic research, that the problem has become clearly focused. One cannot expect children, parents, and teachers who have not formally studied linguistics to be aware of the subtle distinctions that must be made to understand the intuitively simple questions, "How do children learn language?"

All of the hypothetical answers I have sketched above really respond to a different question, that being: "How do children learn to speak?" The crucial distinction, here, is that speaking is a behavior that is guided by certain information and language is the knowledge or information that allows one to perform the behavior of speaking. Complicated? Subtle? Yes, but not incomprehensible. Consider this example as an analogy. Solving a long division problem is a behavior. One engages in an activity to do so. But this activity could not be performed unless one knew or possessed certain information. One must know something about the value of integers; one must know subtraction and multiplication; one must know how to structure or set up the problem. Further, one must know the rules (procedure) for doing long division. The rules specify how the operation is to be carried out. Once the rules have been learned, we carry them about in our heads whether we constantly engage in doing long division sums or not. The information (how to divide) is what stays with us, whether awake or asleep, is what is taught in school, and is what allows us to actually solve any division problem.

Now consider the behavior of speaking. It requires that we possess certain information, too. We must know speech sounds and how to combine them into words; we must know the meanings of words and how to combine meaningful elements into phrases; we must know the structures (arrangements) that such combinations can take to express sentence meanings. We know, in essence, a set of rules for combining elements and just like the math problem, we know how to perform operations. We can change statements into questions or negatives; we can say the same thing in two or three different ways; we can join two sentences together in a compound structure. There are many ways we can manipulate the units of the language (sounds, words), all of which follow specific rules. Our speech is guided by those rules. Although we may be imprecise when we talk or unclear in our expression, we never randomly arrange words in a completely nonsensical fashion.

Returning to the analogy, once these rules have been learned, they stay with us; they allow us to engage in the behavior of speaking whenever we want to; the information does not go away when we are sleeping or when we have had our tongues removed (perish the thought!) or when we have had a laryngotomy. The information allows us to understand any sentence, provided we know the words, and to construct any sentence. But is the information taught the way division is? Psycholinguists suspect it is not.

If language is not taught, then how can it be learned? To answer this, we must first convince ourselves that it would be implausible, if not impossible, that language could be taught. Then we can consider the alternatives left to us to explain how and why language gets learned at all. I will first discuss one way that neither division nor language could be learned. Second, I will try to clarify why division can be taught but language cannot.

The problems one can construct in long division and the sentences one can construct in a language share one common characteristic: they are infinite. There is no such thing as a list of all possible division problems, and there is no such thing as a list of all possible sentences. Since no finite list for either domain exists, it would be logically impossible for someone to memorize it. One's knowledge of long division is no more a memorized set of all possible combinations of divisors, dividends, and quotients, any more than one's knowledge of language is a memorized set of all possible sentences. If that is true (and it is), then it would be impossible to learn either division or language strictly by imitating. Let us consider only the math example in detail. A teacher shows a child the problem 4 divided by 2. The child copies (imitates) the entire procedure and memorizes the operation. The teacher shows the child 6 divided by 3 and 8 divided by 4. The child copies and remembers these individual problems. Does the child know how to divide? No. He only knows three problems and their answers. He does not know 10 divided by 5 or 12 divided by 6 or 14 divided by 7 or anything divided by anything. Suppose the child memorizes a thousand problems. Does he know how to divide? No. He only knows the answers to a thousand problems. A real "divider" can figure out the answer to any problem. Similarly for language. If children simply imitated the phrases and sentences they heard around them, they would only know those particular sentences and phrases. They would not know language. Since we know that both dividers and speakers can solve new problems and construct novel sentences, then it is impossible that these abilities are memorized imitations of only the models that have been encountered. Neither division nor language can be fully learned by imitation.

Why can division be taught but language not? The answer is deceptively simple. Mathematicians understand the rules of division quite precisely. Further, the rules can be simply stated and consciously applied. Not so with language. Linguists have not been

able to specify precisely the rules by which linguistic structures are determined. Even for the simplest operations (negation, questions, pronoun reference) linguists cannot agree on an accurate and precise formulation of how they operate. Mathematicians know how dividing works. They can teach the procedure to teachers who can teach it to children. Linguists do not know how sentences work. Therefore, they cannot pass on to teachers or anyone else a procedural specification for constructing sentences. We ask then, if linguists cannot accurately formulate the rules for constructing sentences, how can we expect parents to know them, much less teach them to their children? There are too many intricate details of language that linguists are aware of for us to accept the possibility that parents could teach rules of a language to their children.

How, then, do children learn language? How do they acquire the information about how language is structured if parents don't teach them? The answer has already been suggested, strangely enough, by our six-year-old, who responded, "They just do." Although the task is not effortless and not without frequent errors, children seem to process automatically the speech they hear around them and automatically begin to formulate good guesses or hypotheses about the structural principles that are characteristic of the spoken forms they hear. Children who have learned language "just did it;" they did it for themselves, by themselves.

Many questions should follow from this seemingly absurd suggestion. One should ask:

1. How do you know that children discover the rules of the language by themselves?

2. Why do they automatically begin to discover the rules of a language?

3. Don't parents play some role?

4. If the process is so automatic, why won't children construct a language even if they never hear one spoken?

5. If the process is so automatic, why do some children fail to acquire language?

Each of these is a valid question and, sadly enough, none has an unequivocal answer. Although dispute still exists and despite the fact that much more data need to be amassed, we can suggest some answers. Each question will be treated in turn under headings which characterize the aspect of research being questioned: data, theory, environment, isolation or deprivation, and disorder.

The Data

The best evidence that children are formulating the rules of the language by themselves comes from the systematic errors they make at various stages of development. Children's utterances deviate from well-formed adult utterances in predictable ways and at roughly equivalent points of development. The fact that children's deviations (errors) are not random, haphazard, and variable is extremely important. The fact that children will consistently produce a particular deviation for a period of time indicates that the modifications they make reflect some systematic or rule-determined source. Let me provide some examples.

When children first begin to say real words, they pronounce those words differently than adults do. The modifications they make are generally referred to as baby talk. With only small variation (special forms that any child may have), the types of modifications all children make are the same around the world. Generally, children demonstrate a preference for single syllable words or repeated syllables, e.g., juice, book, dog, mama, dada. Most often children will initially delete (not pronounce) the final consonant in a one-syllable word, will substitute one consonant for another, and will pronounce consonant clusters (more than one consonant together, like bl, st, pr) as a single consonant. Moreover, children delete and substitute in the same way. The word "juice" frequently is pronounced "du." The final consonant is deleted and the "j" is substituted by "d." In clusters like "st," "sp," and "sk," the "s" is deleted and not the "t," "p," or "k." Certainly, children do not hear their parents making these modifications. Why, then, should they? The best answer to date seems to be that all children are automatically analyzing the sound system of their language in the same way, at approximately the same point in development, and are arriving at the same result. These baby talk forms change with time, automatically, even though parents accept (and thereby reward) these modified forms.

There is ample evidence to suggest that these modifications are not due to the inability to pronounce particular combinations. Two examples will be given. First, some children will begin by pronouncing a word correctly (like pretty). After saying the word in this way for some time, they will suddenly change to a modified form, "pity." Second, there is one very interesting case of a child who pronounced "puddle" as "puggle." But when he tried to say "puzzle," it was pronounced as "puddle." There is no way to account for these occurrences as the inability to pronounce certain combinations. The only plausible explanation is that some systematic principles, formulated automatically by the child, determine how sequences of sounds are to be pronounced. As that system changes, all words are made to conform to it, even previously correct ones.

Further evidence that children formulate rules which then govern the form of their speech is found in the typical overgeneralization of "ed" as a marker for past tense. Once children discover that adding "ed" to verbs is the most regular way to signal past tense, they will use it on all verbs, even if it is wrong to

do so. In fact, just as in the example given above, they will change previously correct forms (came, for example) to an incorrect form (comed) just because that form is consistent with the new rule they have discovered. These incorrect forms will persist for some time, even when adults try to correct children. Eventually they will straighten themselves out, even if adults do not correct them. All that is necessary is that children hear the correct forms used by those around them. The fact that the system for marking tense straightens out no matter whether adults actively correct or do not is evidence that children are automatically discovering and continually re-formulating rules about the structure of language.

Theory

In keeping with the tone of this article, the best answer I can devise for the question of why children automatically discover the rules of their language is "just because." What this means, of course, is that they do it "just because" the human being is designed to behave, learn, and develop like a human being.

For most theorists, even of differing persuasions, there is little dispute on a couple of issues. First, some behaviors, locomotion for example, emerge in a fairly well-defined sequence at roughly equivalent ages for all children. Creeping precedes crawling, which comes before walking. Second, it is generally agreed that these behaviors require some degree of biological readiness, both physical and neurological. Further, motor skills such as walking do not need to be taught. Although parents may encourage their children to practice walking to them, children pull themselves to a standing position when they are ready and attempt to walk automatically. Rarely does a parent have to teach his or her child to put one foot in front of another or to compensate for shifts in balance.

Researchers of child language development generally agree that developmental sequence, biological readiness, and automatic emergence are necessary for language acquisition. But here, theorists part company by attempting to specify more precisely whether development occurs "just because" of linguistic, cognitive, or environmental factors. I will discuss the first two theories in this section and save the environmental arguments until the next.

Some linguists have argued that children acquire language "just because" they are born already knowing something about the form that human languages can take. What they know is not any specific feature of any particular language but rather universal features that characterize all languages no matter how different they may appear to average people. These linguistic universals concern the type of elements, the possible structures, and the nature of the operations that can exist in any language. For example, no language would include stomach growling or teeth

clicking as elements of its sound structure. Further, no language would have an operation that forms questions by saying all the words in a declarative sentence in the reverse order. Languages, do, however, include tongue clicks as speech sounds and reversals of subject and verb to create questions.

These theorists argue that "just because" children already know these linguistic universals they are prepared to discover which elements (among those that are possible) are used in the language they hear around them, what structural arrangements are used to express meaning, and how operations are performed.

So, here's the picture. Children already have a good idea of what to look for in the noise they hear around them. As children hear language, an internal mechanism automatically sets about to figure out the organization of that language. This device ignores burps, stomach growls, teeth clicks, grunts, coughs, and the like, and attempts to analyze speech. How it can tell the difference is "just because" it already knows which features can be a formal element in a language and which cannot.

An alternative answer to the one provided by the linguistic theory is that children acquire language "just because" they are cognitively prepared to do so. Many psycholinguists have argued that language development is closely tied to the emerging ways children are capable of thinking about the world. They postulate that language only develops after children are capable of mentally representing the world as sets of separate persons, objects, and events with a permanent existence. The change in how children view the world can be seen in the following example. At six months, if a child drops a toy he or she is playing with out of the line of sight, he or she will not search for it. He or she acts as if it ceases to exist simply because he or she no longer sees it. Between one and two years, the child begins to show some indication that the object must continue to exist by searching for it. These searches become more persistent and more accurate as the child approaches two years old. The fact that the child can hold some impression in mind that the object which has disappeared continues to exist is called a mental representation.

These psycholinguists argue that it is "just because" children can mentally represent objects when they are absent that enables the child to ask for objects that are hidden from view (cookies in the drawer) or more of something that has been consumed (more juice) or for the repetition of an action that has ceased (bounce again). As children begin to categorize the world as events, activities, locations, and entities, they begin to refer to these categories in their speech. As they learn to represent interactions among these categories, they begin to talk about the ways they interact with two- and three-word utterances. Children do this "just because" they can represent the world symbolically and because they now view the world as a set of categories that can interact in particular ways (entities can be located, activities can be initiated and stopped).

So, here's the alternative picture. Children conceptualize particular features of the world and want to talk about them. "Just because" they have already discovered how people, objects, and events interact, they listen to how adults talk about these interactions and match what people way with what they do. Since they have already categorized activities, they then learn from this match how speech can be used to talk about events they already understand. Children learn language, on this view, "just because" they are cognitively prepared to do so.

Environment

Certainly it must be true that the environment has some influence on children's development. Parents talk to their children, delight in their children's speech, and respond physically, emotionally, cognitively, and linguistically to their children. Parents clearly provide models of language when they respond to their children, and children acquire language through the verbal interactions they have with their parents. Isn't the environment, then, a necessary contributor to language development? Most definitely, it is. But the issue is to what extent the environment is responsible for what the child learns and the type of effect it has on his or her development. There are a variety of views on this topic, all of which would elaborate the "just because" explanation in different ways.

One view is that the environment is responsible, almost totally, for any learned behavior. Depending on what type of response follows a behavior, that behavior will tend to occur again in a similar situation if it is followed by a rewarding response and will tend not to occur again if it is not rewarded. These responses serve to reinforce (or strengthen) certain behaviors and extinguish (or weaken) others. Proponents of this theory would argue that because the responses that influence behavior are in the environment, external to the child, that it is the environment that is principally responsible for the child's acquisition of language. The child learns which words are associated with particular objects by the parents' response of either, "That's right," or "No, that's a truck." The child benefits from this type of responsive feedback and so acquires language. This theory would propose that children acquire language "just because" children are capable of benefiting from environmental feedback and "just because" the environment responds with either reinforcing or nonreinforcing reactions which shape children's behavior.

Another view of this problem is currently receiving considerable interest. The proponents reject the extreme view discussed above that children are passively acquiring their language solely under the influence of various schedules of reinforcement. This position would argue that children do actively process and organize the language they hear but that the language they encounter in their environment is specially designed to simplify the task. Researchers have examined how mothers and children interact linguistically. They have found that mothers talk differently to children than they do to adults. Mothers' speech to children is shorter, simpler, slower, and more precisely articulated. Mothers initiate

routines ("Where's your ear?"), expand children's speech, and request that children repeat or clarify a misunderstood utterance. It is argued that "just because" mothers do not present all the complexities of speech at once that the task of analyzing, categorizing, organizing, and discovering the rules of the language is made simpler. Children acquire language, from this point of view, "just because" the language they hear in the environment is simpler to analyze.

Deprivation

Studies of deprivation, either from isolation or deafness, have shed some light on what it means to acquire a language. Earlier I focused on this problem by questioning how one could maintain that language acquisition was an automatic accomplishment if children who are never exposed to language fail to acquire a linguistic system. The question is nowhere as neat as this. Here, I will consider the reasons each of the various theories would give for why a child might fail to acquire language under different conditions of deprivation. Let me begin with the most extreme case.

Suppose a child was completely isolated from the world of human beings, never heard a language spoken, but had all his or her basic needs met. Would he or she acquire a language? Most agree that he or she would not. Why this is true would be explained slightly differently depending on one's theoretical preference. The linguist would argue that the child does not acquire language "just because" the internal mechanism which is supposed to automatically figure out the organization of speech was never triggered or set in operation. Being exposed to speech is necessary to set the process in motion. A proponent of the cognitive position would argue that even though the child forms conceptual distinctions about objects and events "just because" language was never available as a match to these mental representations, a linguistic system for referring to conceptual categories could not emerge. The reinforcement theorist would claim that the child fails to develop language "just because" the child lacked models to imitate and because no reinforcing conditions existed. Despite the differences in the specific responses, it is generally agreed that a child needs exposure to language in order to learn it.

A more reasonable way to approach the issue of deprivation is to examine what happens to a child's acquisition of language when he or she is cut off from access to the environment in less severe ways: auditorially, visually, or motorically.

Congenitally deaf children will never hear speech, but that does not mean that they will fail to acquire a language. Researchers who have studied manual communication systems report that sign language is as equally intricate and complete a language as English, French, or German. Further, deaf children in a signing environment will automatically begin to discover the system of gestures and hand configuration characteristic of the manual system in much the same way that hearing children learn speech. They proceed through the same stages, make similar mistakes and organize the system in a structures and rule-governed way. This finding supports both the

linguistic and the cognitive theories. The linguist would claim that any system which contains elements, structure, and operations (as sign does) would trigger the language learning mechanism. The cognitive theorist would argue that the child's capacity to organize the world into categories is unimpaired by deafness, and a match between conceptual representations and manual (linguistic) references to them is still possible.

Visual deprivation presents a slightly different problem, however. Despite the fact that blind children can hear speech, research indicates that they are delayed in cognitive development. If their ability to represent the world in terms of conceptual categories is impaired, then according to the cognitive view, there ought to be a corresponding delay in language development. No significant linguistic delay has been reported. Similarly, motoric handicaps which prevent children from acting upon the environment and observing the effects of their manipulations are neither cognitively nor linguistically delayed. In both cases the simultaneous match of speech and action is limited, but language is unaffected.

None of these findings necessarily means that the linguistic position is correct and the cognitive position wrong. They simply mean that we do not yet know the complex ways that language, thought, and environmental feedback interact to result in the automatic acquisition of language. What we do know is that as the sources of deprivation begin to multiply (for example, deafness and blindness), the development of language becomes more severely impaired. These multiply depriving conditions begin to approximate total isolation.

Disorders

The effects on language development of one or another type of deprivation can be explained by one or another of the theories. However, there is one population that equally baffles all the theories. This population has been called "language disordered" and is characterized by roughly normal functioning, no known etiological cause of disturbance, intact sensory abilities, but nonnormal linguistic development. No theory can adequately explain why children who hear language, categorize and mentally represent the world, and respond to conditions of reinforcement do not acquire language. These children contrast sharply with those who are completely isolated. The isolated children fail to acquire language because they never hear it; the disordered children hear language but fail to acquire it. We can only speculate that the isolated children possessed the mechanisms to acquire language if the environmental conditions had been present and that the disordered children, despite environmental access, lack an efficient processing mechanism. Both types of children fail to acquire language automatically, but the isolated children's failure can be explained easily. The disordered children's failure cannot.

Conclusion

Through the simplicity of my characterization of language acquisition, I have tried to develop a single theme: children acquire language "just because". I have attempted to unify the theoretical diversity under this central theme by demonstrating that each theory has a different way of elaborating the "just because" explanation. Indeed, the "just because" theory provides a convenient excuse for not taking a solid stand on any of the diverse issues by acknowledging the fact that years and years of future research will be required before a conclusive theory is reached. For the moment, in the face of conflicting evidence, unsolvable problems, and general ignorance, I am comfortable with the simplistic explanation. Children acquire language "just because" they have a predisposition to pay attention to language, the capacity to organize and mentally represent the world, and the ability to benefit from and respond to environmental feedback. It is a safe conclusion to maintain that children acquire language "just because" they are uniquely designed to do so.

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SOCIAL INTERACTION: A PERSPECTIVE FOR INTERPRETATION OF EARLY COMMUNICATION OF THE DEAF-BLIND CHILD

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The trend to study the social interaction patterns of children in early stages of language development fits the needs of those who work with the deaf-blind, multihandicapped child. It is that indifference or occasional resistance to contact that is highly frustrating to handle. In normal social encounters the individual uses conventionalized modes of interaction to reduce conflict. In successfully confronting the deaf-blind child, the care-giver must reorganize his or her ideas about social interaction and devise a new set of rules. Some sort of communication method has to be established to facilitate the interaction.

Those who are in contact with the deaf-blind child may find help in modern theories of normative development. Explanations or justifications of asocial behavior may be drawn from Piaget and Bruner, but the reader should keep in mind that reinterpretation of such theory to fit deaf-blind development is risky business. Piaget may suggest what knowledge a child possesses at various stages and what perceptual/intellectual obstacles a child must overcome for intellectual growth to occur. Piaget's child is an internally motivated explorer acquiring concepts of space, time, causality, and object permanence. Problem-solving techniques are refined, movements are abbreviated and internalized, and representation emerges. The growth of abstraction is termed decentration by Piaget. The deaf-blind child tends to maintain circular patterns of behavior. Inhibited by sensory loss and unknown syndrome damage, the singular lack of curiosity or motivation to encounter novel situations delays cognitive, social, and linguistic development in the low-level deaf-blind child.

Current research in child language is exploring the interrelations between language, social, and cognitive knowledge. The Unified Model (Lewis & Cherry, 1977) explains the growth of these three areas as a differentiation process from a primary global way of knowing the immediate surroundings. The stress is on analysis of social environment. Lewis and Cherry, "believe that language development can best be studied and understood as part of the socialization processes that characterize the child's transactions with others...The child's acquisition of knowledge (both meaning and grammatical constructions) is dependent on his early transactions with his social world" (p. 242). Those who study deaf-blind communication development look for behaviors that indicate a desire for social attention or contact (pointing, spontaneous imitation, manipulation of adult or peer). If a child performs such behavior spontaneously, it is believed that that child will develop higher levels of complexity, proceed at a

faster rate, and generally arrive at a more normative state of social interaction knowledge (which includes language). If a child does not express the above independently, what avenues are open to elicit them? What skills are needed for a child to begin to realize that his or her body can serve communicative functions?

Bruner (1976) stresses the importance of the social context and the routines that evolve in various contexts. Analysis of the first year of life will show how social roles are conventionalized. By participating in routine interaction, the infant learns what methods are effective and what modifications are necessary to insure satisfaction of his or her goals. The person working with the deaf-blind child needs to be aware of how a child functions in contexts where a routine has been established (and where a desire to carry out a routine exists). In most cases the worker is better able to read communicative behavior from the child because the situation is familiar. Bruner's work with mothers and infants suggests that as they both become familiar with the behavioral elements of an interchange, they are better able to interpret one another's meanings. Through joint action or a need for assistance, the child passes through four modes of communication. Observation of the deaf-blind child reveals versions of all four of these modes. The earliest is the demand mode which emerges from innate patterns of expressing discomfort. The request mode requires the development of anticipatory schemes. The child must associate some behavior with a result. The exchange mode includes a reversal of roles in the adult-child dyad. The child requests, receives, returns whatever was received, and requests again. Consider early imitation as an example of this. The reciprocal mode involves the child and adult performing nonidentical roles to reach a common goal, i.e., building a block tower.

> The infant is not only learning...what constitutes indicating something to another, or having something indicated to him, but he is also learning how to substitute new means for doing so in order to achieve less certain outcomes by the use of more ritualized techniques (Bruner, p. 261).

The above discussion of routines and the building of interactive behavior is a natural lead-in for consideration of Coactive Movement Theory. In contrast to the daily living routines that have some reward (physical) or some functional goal that requires they be performed daily, the coactive routine is an isolated prelanguage routine. All routines have LSC, but coactive may seem harder to grasp. The concrete situational cues may appear to be absent, but the adult's body is the concrete element. Interest in that body and its relationships to the child's as well as the creation of anticipation/confidence are initial goals. Van Dijk draws heavily from Werner and Kaplan's Symbol Formation,

so the end product of co-active treatment is development of the symbol and the ability to represent in formalized language. His theory includes much of the same emphasis on social awareness with which Bruner and other current child language researchers have dealt. The concern with movement as the primary means of acquiring knowledge mirrors Piaget's sensorimotor intelligence. Through patterning and shaping such movement the child gradually attends to another body, begins to point in a non-representational referencing, and comes to imitate.

For the worker the task is to determine just exactly what kind of communication level to start on. Physical abilities, attention (length and to what it is directed), symbolic behavior (memory, representations of environment), and the general kinds of organizing the child exhibits are characteristics to consider. Most low-functioning children organize according to what a source of stimulation can do to satisfy physical desires. The staff member needs to be aware of how much autonomy appears in the child. The "conversation" will depend on this. It is interesting to compare these two descriptions of "conversation." From Van Dijk:

> This is the source of communication, moving, acting together with the child. You answer what he asks and you ask and he answers, but in a dialogue orally, but at a very basic level of senso-pathic exchange of feelings, by doing large movements together (Van Dijk, p. 34).

From Lewis and Freedle:

> F squeeks a rubber toy making noise. As a "consequence" F kicks her feet and squeals with apparent delight. Mother turns toward F smiling. F looks at mother and vocalizes. Mother walks toward F smiling and vocalizing. F quiets, eyes fixed on mother (Lewis & Rosenblum, p. 158).

Obviously, the big contrast here is due to the sensory losses of the deaf-blind child. Still, it seems worthy of reflection to analyze development of simple, primitive social routines.

The co-active routine can become an interaction training session wherein the child becomes interested in something another person can do for him or her. If the child is not interested in another person, then an object that requires an adult to be satisfying may be introduced. The early routine emphasizes anticipation and provides the child with an opportunity to make the next move in the interchange independently. Eventually, when the structure of the interaction has been understood, more and novel behaviors may be introduced to test the child's attention. Throughout, the child becomes increasingly distant from the other. Again the decentration process appears. As the child becomes aware of elements of space, time, causality, permanence of objects, he or

she begins to communicate knowledge about the relationships between these elements in their environment. Through the four modes that were described above and through actual formal language, the child may show an amazing ability to tell the adult just what is on his or her mind.

The expression of what the child knows about his or her environment occurs in the form of semantic relations. Rather than look at syntactic structures such as the subject/verb categories, the observer may find examination of the more basic semantic categories more representative of what the early communicator is producing. Recent research has analyzed how social interaction affects language development. How does it affect the deaf-blind child? The hearing and vision losses and lack of motivation to seek social stimulation seem to limit the range of observations a deaf-blind child can make. This is certainly true, but much behavior is communicative through the caregiver's interpretation with the help of the context. In other words, by reading the elements in the situation, the adult can get meaning from simple gestures.

Greenfield and Smith (1976) studied the sequence of emergence of semantic relations with special concern for what in a situation was commented on by the child at a one-word stage. Elements that were not present, that were not in a usual state, were commented on. This could be difficult to observe in the deaf-blind child, since even at the beginning of formal sign language use, the world is still considered an extension of the body. The prelinguistic child should not be excluded from this discussion. Bruner suggests the selection of linguistic target behaviors that may have prelinguistic precursors. The gesturing child surely communicates with meaning. The child that hands the caregiver a full milk carton is asking for the action of an agent (pouring of milk by the adult). As Greenfield and Smith express it:

> If the child is signaling semantic relations, one element at a time before she has the ability to combine words, this is evidence that nonverbal events--the child's actions and perceptions--are being structured in terms of the semantic functions of Agent, Object, Location, etc. and that words are being thus used in such a cognitive-perceptual-action framework from the outset. Thus, the knowledge of the semantic relations of referents in the concrete context could be used by the child to learn how these relations are expressed in the child's particular language (p. 30).

For the one-word stage child, open-ended situations might stimulate an expression of what is worthy of communication. Looking at pictures and asking questions that require some choice (The opportunity to make choices should exist with the lowest level deaf-blind child. The trick is not to destroy structure, but to provide the chance to be expressive.) are good ways to observe semantic relations. In the prelinguistic child, careful observation of how that child deals with interruptions in a routine and how that child explores a new object can help one understand. Bruner

suggests an interesting way to explore what the child may be interested in and what about an object is communicated:

> An object is successively placed into as many different action patterns as the child can manage...Or an action is fitted to as many different objects as it will accommodate...These play patterns, while in no sense direct precursors of propositional predicating, are nonetheless striking examples of separation and variation of comments on topics, with either the object serving as topic and actions-upon-it as comments or the action serving as organizing topic and a variety of fitting objects as comments (p. 282).

The caregiver can build on these object/action relations by creating situations that will generalize either the action or the object. The idea here is that even though a child is not obviously communicating, he or she is mentally or motorically manipulating and exploring. The caregiver must give attention to functioning in all three areas of cognition, socialization, and language in order to expect acquisition of conventional communication. Building schemes for manipulation of an object provides an interaction sequence that may benefit social and linguistic development (through experience of role taking), as well as cognitive development (through examination of object properties). Attention to the briefest social encounter is crucial for understanding a child's code. The fact that a child is able to respond to a body squeeze in the same way each time is encouraging. The child has learned his or her role in a social interaction, and that is the beginning of conversation.

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THE USE OF MOVEMENT TO DEVELOP BODY SCHEMES, ORGANIZATION AND COMMUNICATION IN DEAF-BLIND CHILDREN

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The movement sequence to be presented will follow a developmental order; however, we must be careful not to fit children into it. It is a possible way to look at our severely impaired, deaf-blind child and to be used when appropriate. Not all children benefit from this approach because it depends heavily on how a child relates to the world and what that child's interests are, which is important for the teacher to know so he or she can use it creatively and differently for each child. Each child must be carefully observed to see how he or she relates and communicates. This kind of program can be used only in a totally integrated way in combination with an overall program to emphasize communication and daily living skills.

When an educational program starts, the child is very unaware of his or her environment. The deaf-blind child touches with no intentionality. Many times after a program, we find the child responds to auditory stimulation much more consistently. Sometimes we might think it is due to auditory training, but many times we find the child more responsive because of his or her liberation from their autistic-like behaviors. Of course, our children do have visual and auditory losses, but often not to the degree we perceive or often think. We often find the child relating to the work in an undifferentiated and unintegrated way. The child does not relate to the world, people, and objects, but directs all attention inward to his or her own body. According to Prick, this kind of behavior is physiologically at the subcortical organization, and child does not anticipate and is not prepared to respond because of damage to the reticular formation. This is the system which has a generalized influence on the cortex and arouses the cortex for stimulation. Obviously, the child is unable to integrate fragments of experience to a whole because his or her brain only deals with isolated fragments. Therefore, it is very difficult to help the child become organized and realize he or she has an ego.

The child usually cannot tolerate any sort of change because the would becomes chaotic. He or she prefers to stick to the same ritualistic activities of light play and light stimulation or the same mechanized toys day after day. When the child is forced to get out and do different things from what he or she ordinarily does, like taking a walk or using a cup, he or she wholeheartedly resists, gets upset, and tries to cut off contact completely. The children only want to self-stimulate with people and objects.

There are two kinds of autism: secondary autism, which is a reaction to sensory handicaps, and primary autism, which is mostly due to brain damage. Probably we deal with children in the latter category.

Educationally, whis means we must use a very organized, systematic framework to work with and teach these children. It is

imperative that the child experiences structure and continuity on a daily basis.

Movement with rhythm is a beginning step to help us relate to the child. Usually the child has some movements that can be used and then modified, which helps to keep him or her in touch with the teacher. The development of body knowledge is important in the growth of ego consciousness. It is essential to develop body-scheme with the developmentally young child.

Because of the child's sensory deficits and brain damage, the child cannot form adequate world images. He or she does not succeed in discovering structures in the world around him or her and therefore, the world remains chaotic in character. Things do have meaning but only as they appeal to his or her body and fit into his or her pleasure world.

It is important to start in a confidential atmosphere in a good person-to-person relationship, which gives the child the security he or she needs. Many times the eight-year-old, severely retarded child never managed to grow out of the physical stage and will be sensitive to the kinds of stimulation that a mother would give her baby. The child might be responsive to singing, hugging, rocking in an atmosphere of togetherness, sharing experiences, discovering new possibilities, surmounting difficulties, and sharing well-known activities of daily living, like bathing, eating, dressing, and playing. Hopefully, a sharing feeling of confidence and intimacy can be created.

The child who has visual and auditory impairments shows underdevelopment in his or her motoric development and has an underdeveloped body scheme. The child uses his or her body partially and inefficiently; because of the handicap, the motivation to move is considerably reduced. The child moves less and more one-sidedly than a normal child does. The normal child goes after the ball that he or she sees roll away, or an object that appeals to his or her fancy, drums the dustbin with a spoon because he or she enjoys the noise. The enticing effect of the world is severely reduced if there is a disorder in sight or hearing or both.

So in the early stages, a child is not yet aware of the distinction between his or her own body and the rest of the world, the limitations of his or her body, and of the existence of other people or things around him or her. His or her world consists of making and undergoing his or her own movements.

Therefore, we must start at the child's level. We begin by moving together with the child in close bodily contact, using very simple rhythmical movements that resonate in the child's body so the child automatically joins in with the movement. By suddenly stopping the activity or by changing it, we try to make the child aware of a difference, a change. Perhaps the child realizes something extremely pleasant has stopped and wants it to continue. The child's slightest reaction will be the indication to begin again, and he or she may also become aware of that his or her unconscious reaction serves to set the activity going again; thus, he or she develops body consciousness which can grow to be self-consciousness.

I. Resonance Phenomenon

At this level the teacher has to adjust him or herself to the child's movements. For example, because swaying is in Tonya's repertoire, the teacher would enter the child's world at her level.

The goal of this activity is for Tonya to indicate through nonverbal communication her desire to move. This dialogue can be expressed by her reaching for the instructor's hands or moving her body independently.

Now that Maria has entered the child's world at her level, and she has accepted her, we can now modify Tonya's movements. Thus, by adding another movement, we will encourage anticipation by child.

The following movements on the floor and bench are in Tonya's repertoire of behaviors. These sequences are used to develop anticipation of movements and to encourage a relationship with the teacher by establishing a nonverbal dialogue. At this level, there is little or no distance between the child and the adult.

II. Co-active

At this level, the child and teacher move together with gross body movements to help child discover his or her own body as an instrument with which to explore the world. At this level, they build a dialogue through movement. Gradually the teacher increases the distance between him or herself and the child performs on his or her own.

Some children are not motivated to move the entire bench; therefore, shortening the distance will be less frustrating for all concerned.

Limb movements are integrated with co-active. Limb movements are introduced contingent upon the child's ability to imitate gross body movements.

Later, when the child is performing more of the movement on his or her own, the introduction of objects is appropriate.

III. Nonrepresentational Reference

1. This is a transitional stage between co-active movements and imitations.

2. The goal of this activity is to build up body image through referring to specific parts of a child's body.

3. It is important to sequence the presentation from person-to-person, person to doll, person to Melvin (movable cardboard figure), person to stick figure, so that the child develops body awareness and a symbolic representation of himself.

IV. Imitation Level

1. Use same activities as co-active movements, but with increasing distance in time and space.

2. First, we start with movements because developmentally they are easier than positions.

3. Developmentally, we start with symmetric movements. Again, we utilize familiar movements as models for imitation of positions.

4. Assymmetric, alternating and crossing the midline movements follow in developmental sequence.

5. The presentation of movements has gone from a person-to-person level to a symbolic level through the presentation of the doll and stick figure.

6. Here again, the teacher uses familiar movements at this level, and the child truly imitates due to the presence of increased distance in time and space between the child and teacher.

V. Language

A. Natural Gestures

The first concepts, the first meaning of an object to the child, is elicited by a motor reaction, the way the child handles the object. It is vital for the teacher to watch the child very closely to see how he or she handles the objects in his or her environment. This will give the teacher the clue to represent objects in the child's environment in which the motor components are obvious. These natural gestures can only arise from experiencing the motor qualities or actions of the objects. Therefore, before teaching any gesture, it is important to see how the child handles and uses an object. The most important aspect of communicating through natural gestures is that the child starts to discover that he or she can use his or her body as a medium for representation.

B. Formalized Language

In developing a child's program, the teacher should be aware of the various modes of communication so that the most appropriate communication system or systems would be adapted, whether it be oral speech, fingerspelling, sign language, natural gesture, or graphic communication.

The various movement stages leading to imitation and natural gestures presented will reflect levels of passive or active participation and interaction with people and the environment on the part of the child. If you feel a child is at a beginning developmental level and chooses to sit and rock in a corner, accompanying this with bizarre behaviors that indicate a desire for self stimulation, then any kind of active movement or participation in the world would probably be rejected, and the child would need to be manipulated through all phases of programming. However, if the child can imitate and has discovered that he or she can affect his or her world by using his or her body to make needs known, then that child is obviously more actively involved in his or her environment.

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